

Fig.1

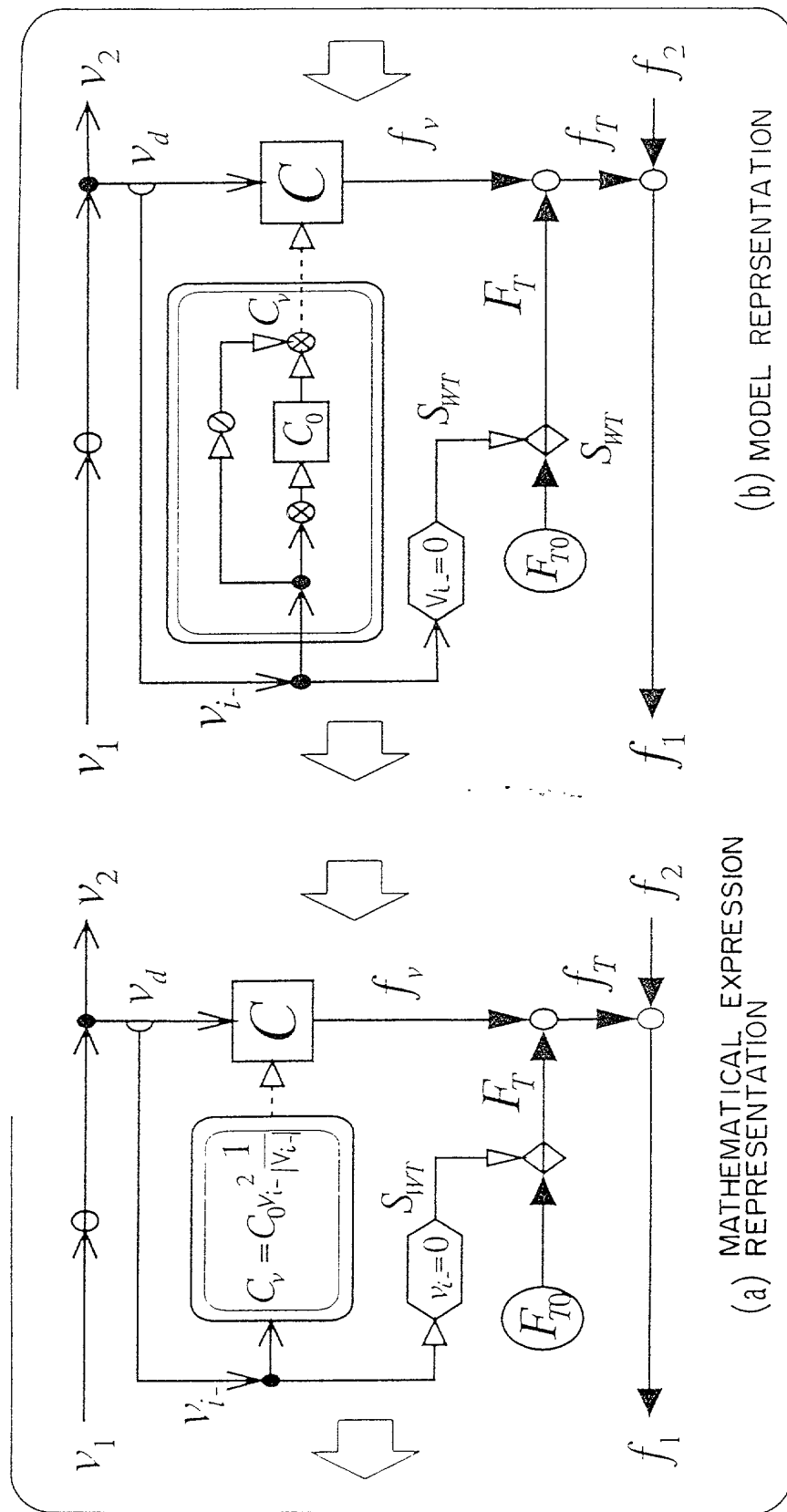


Fig.2

1

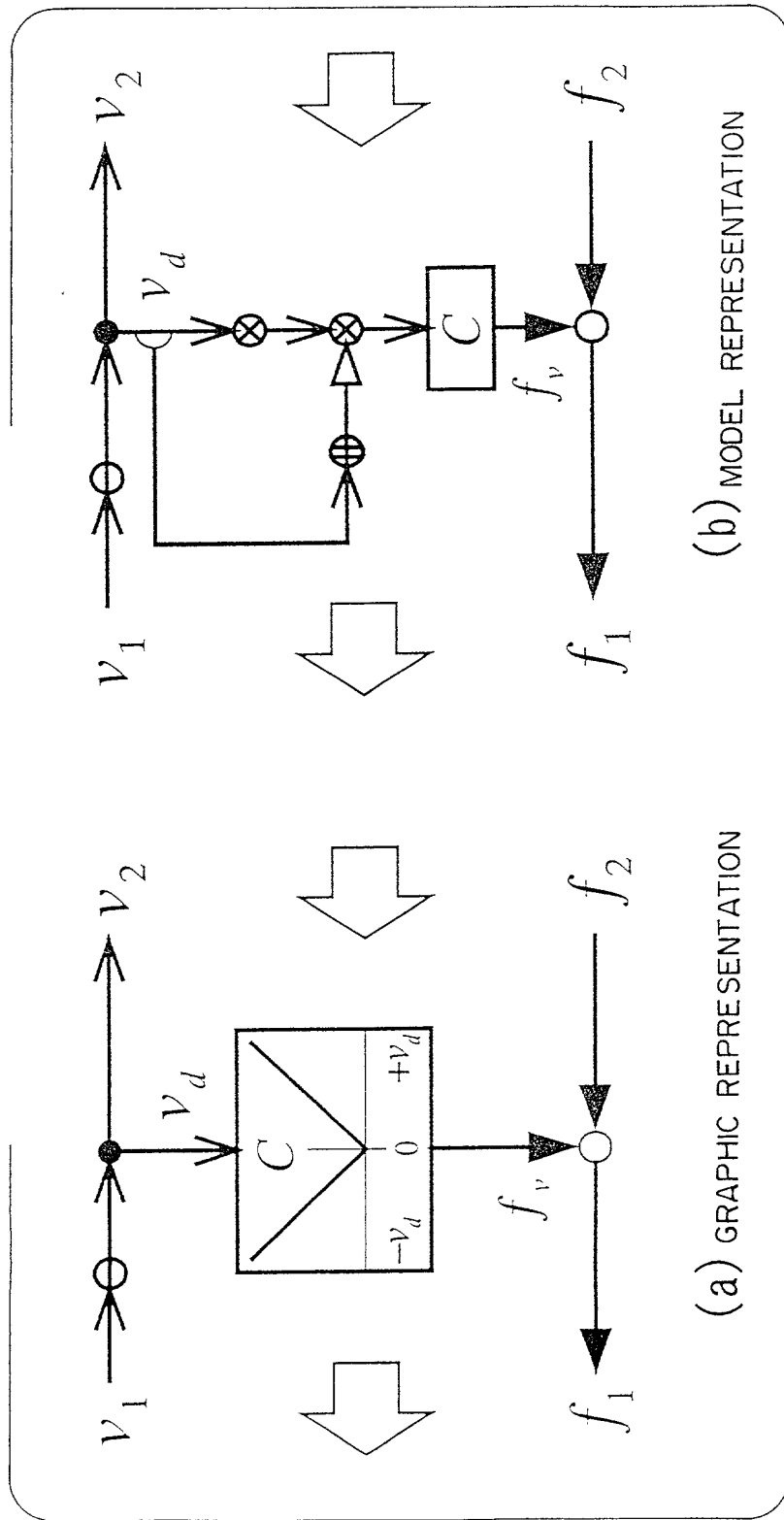


Fig. 3

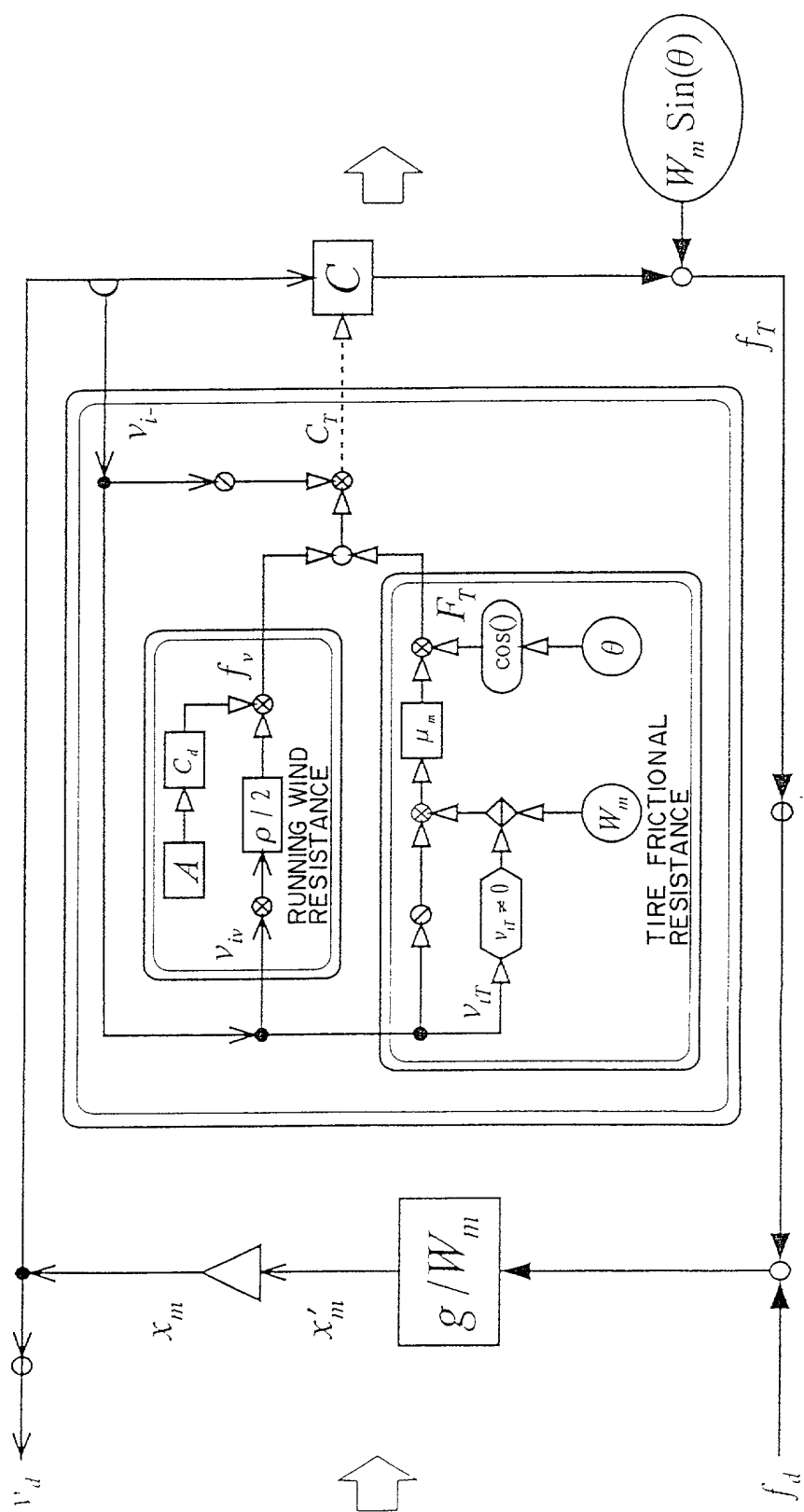


Fig. 4.

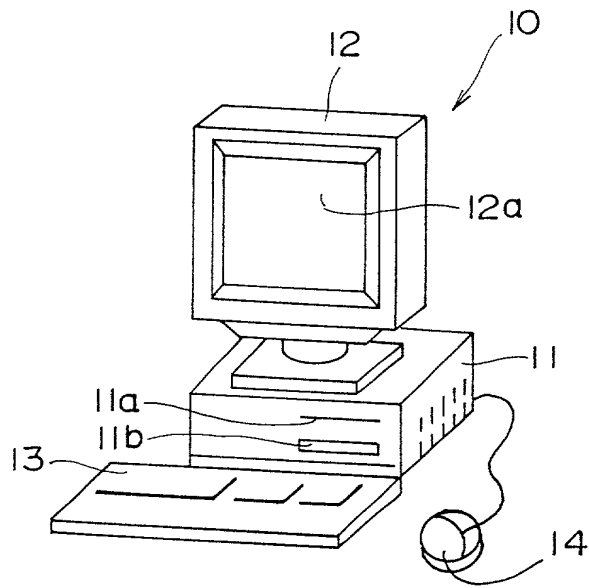


Fig. 5

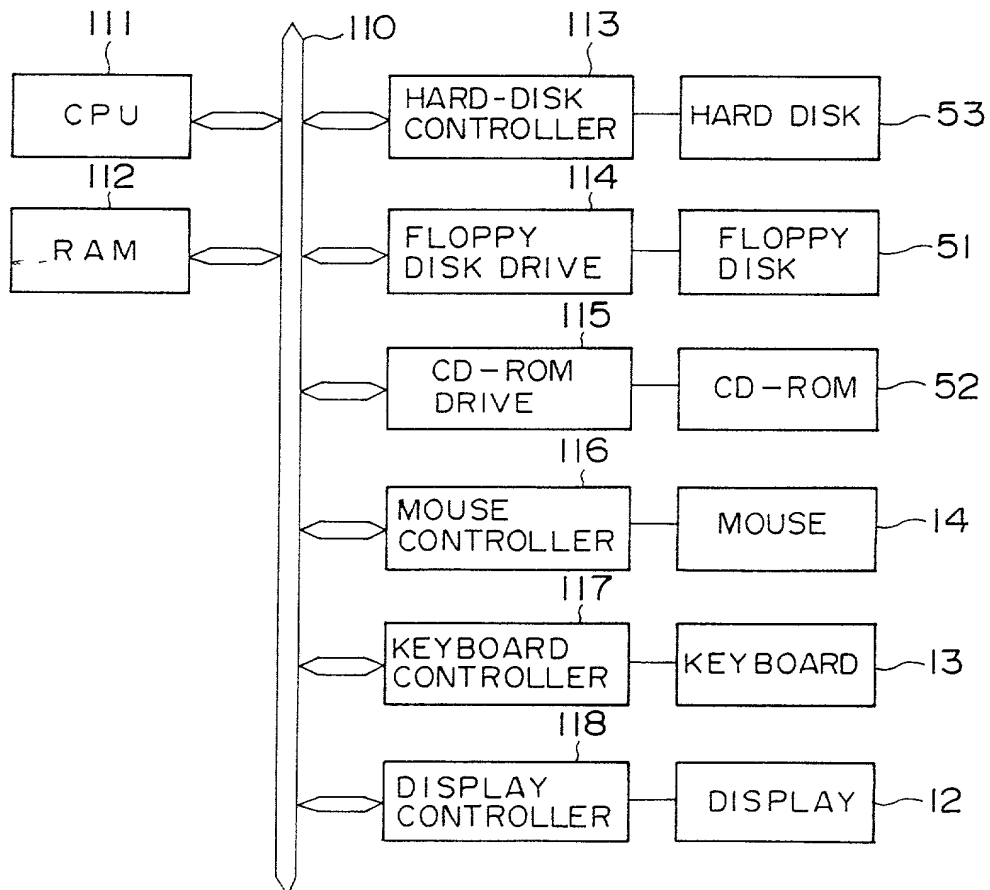


Fig. 6

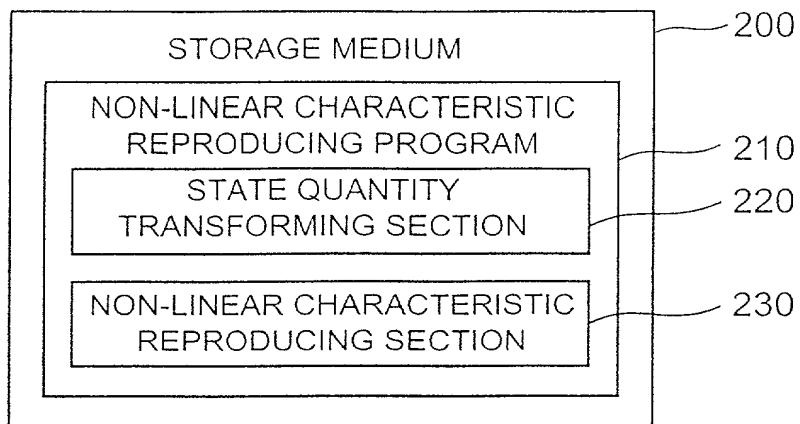


Fig. 7

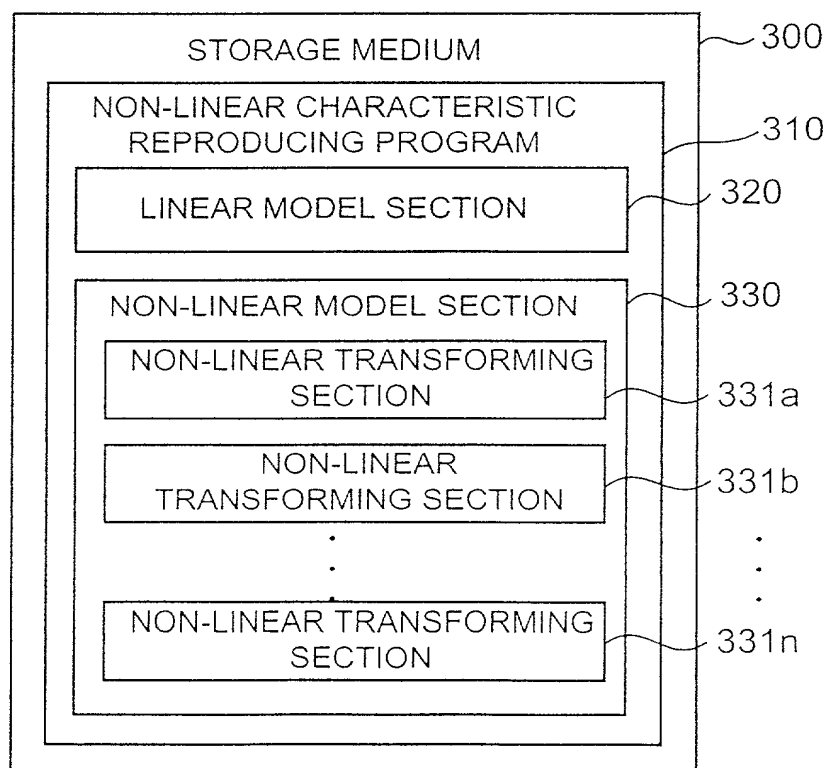


Fig. 8

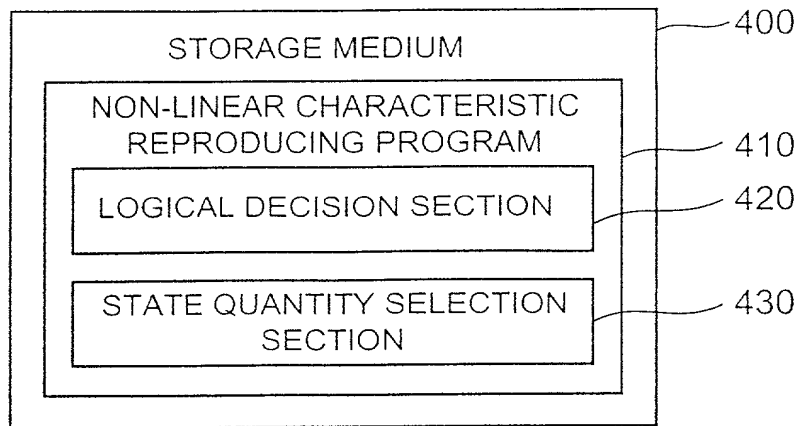


Fig. 9

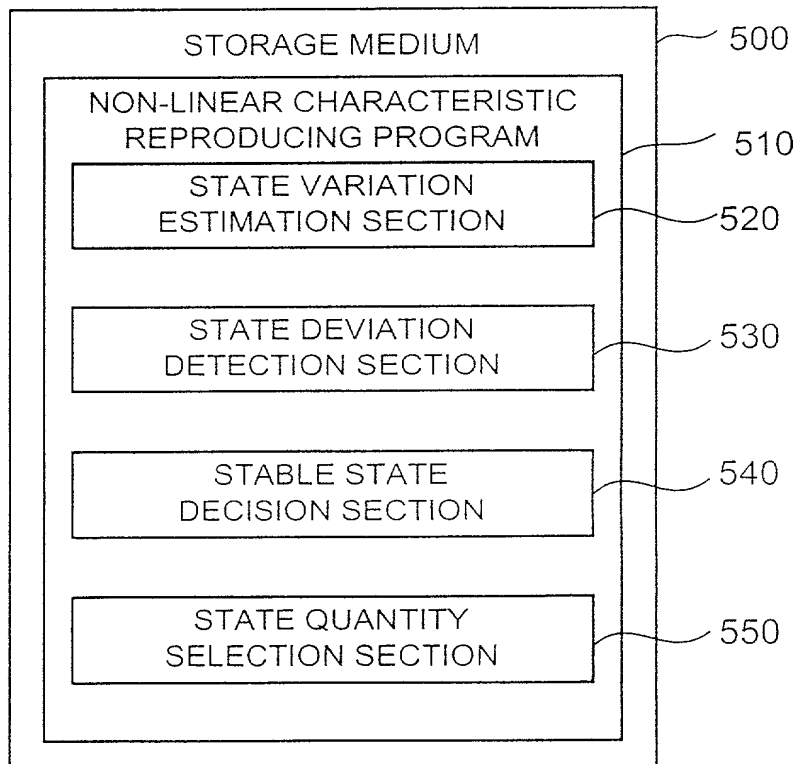


Fig. 10

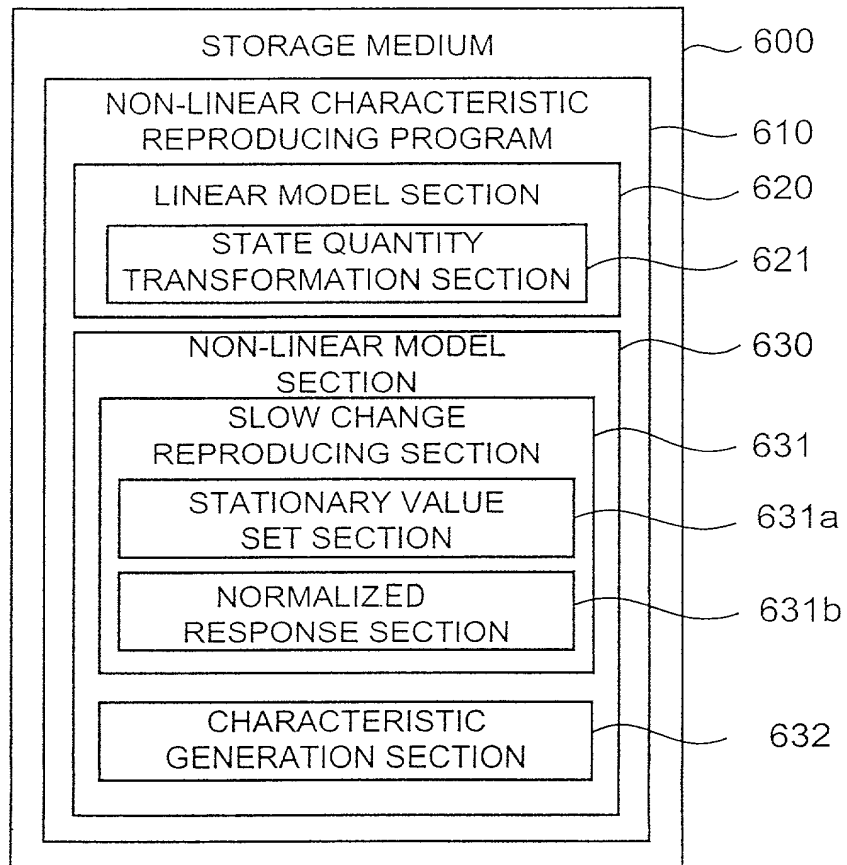


Fig. 11

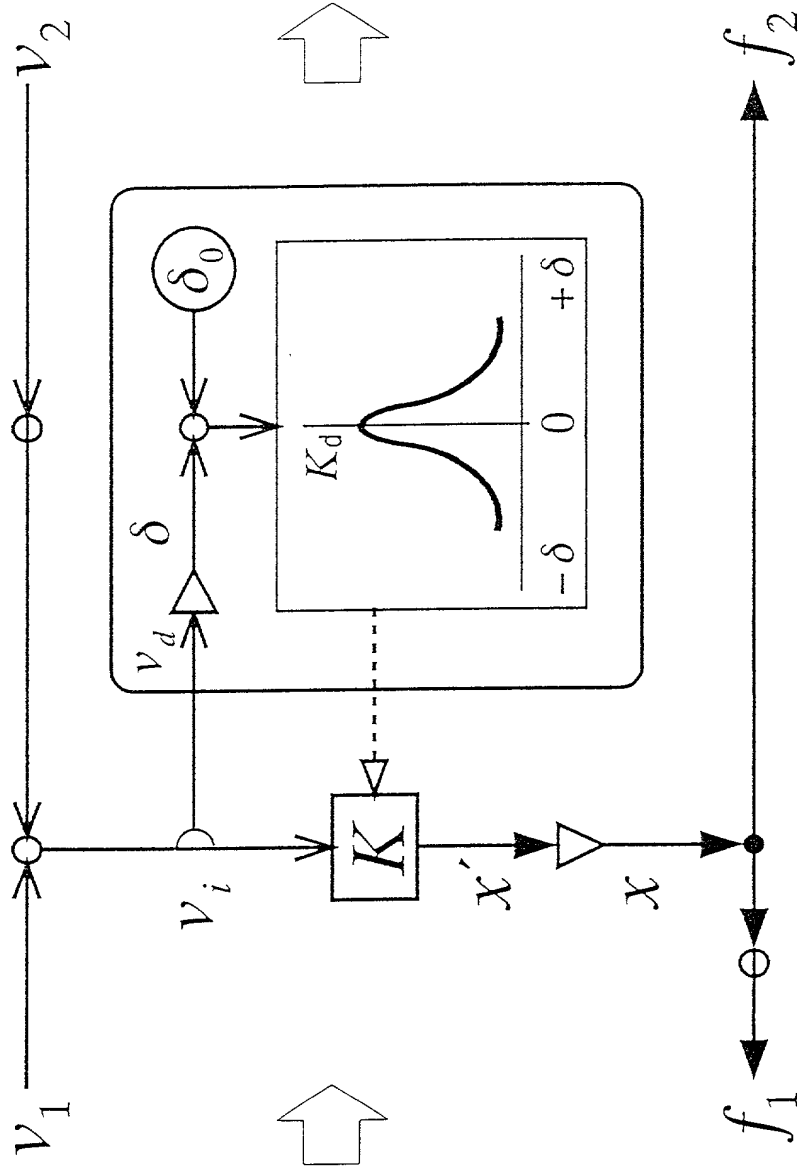


Fig.13

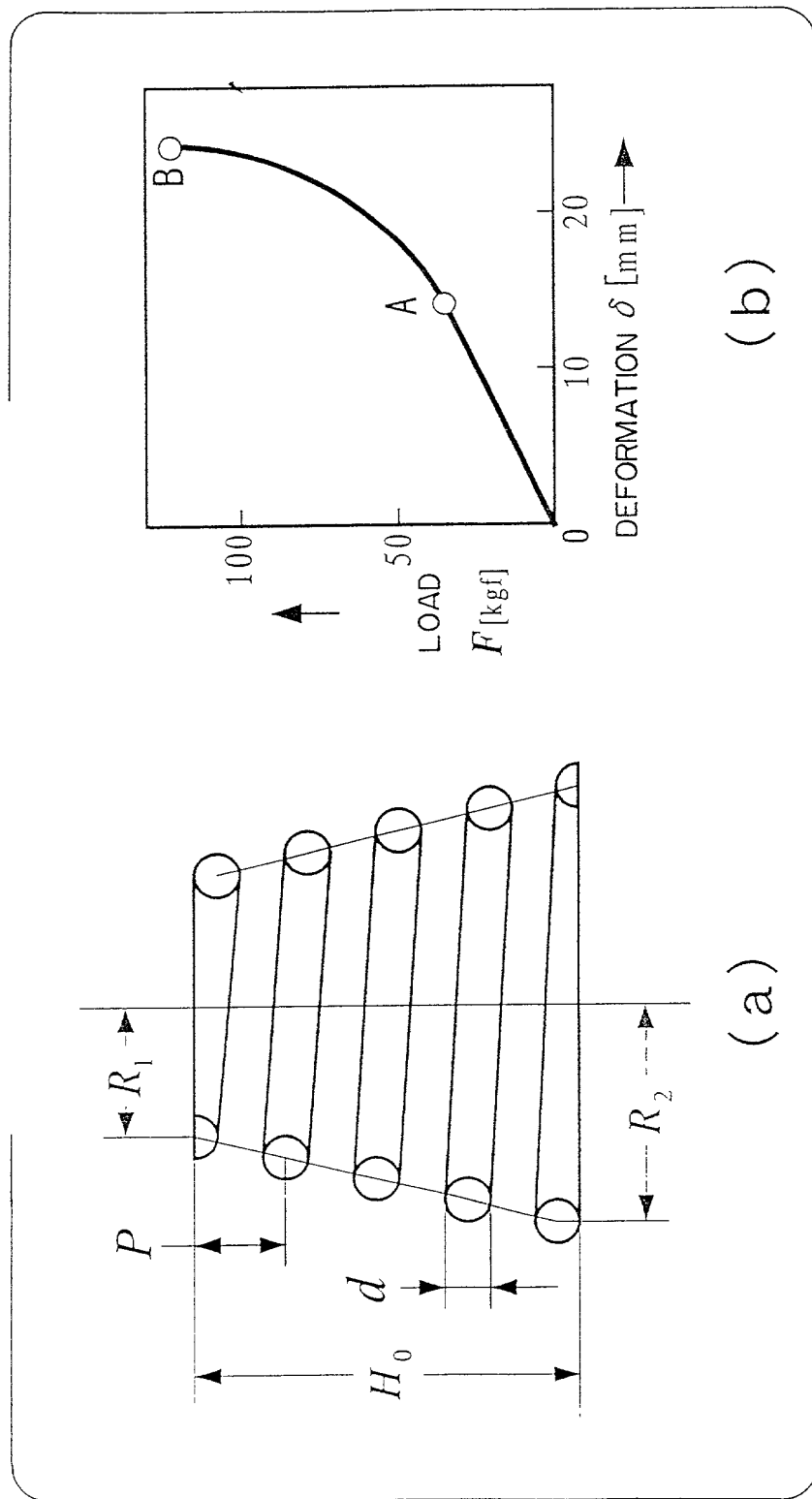


Fig.14

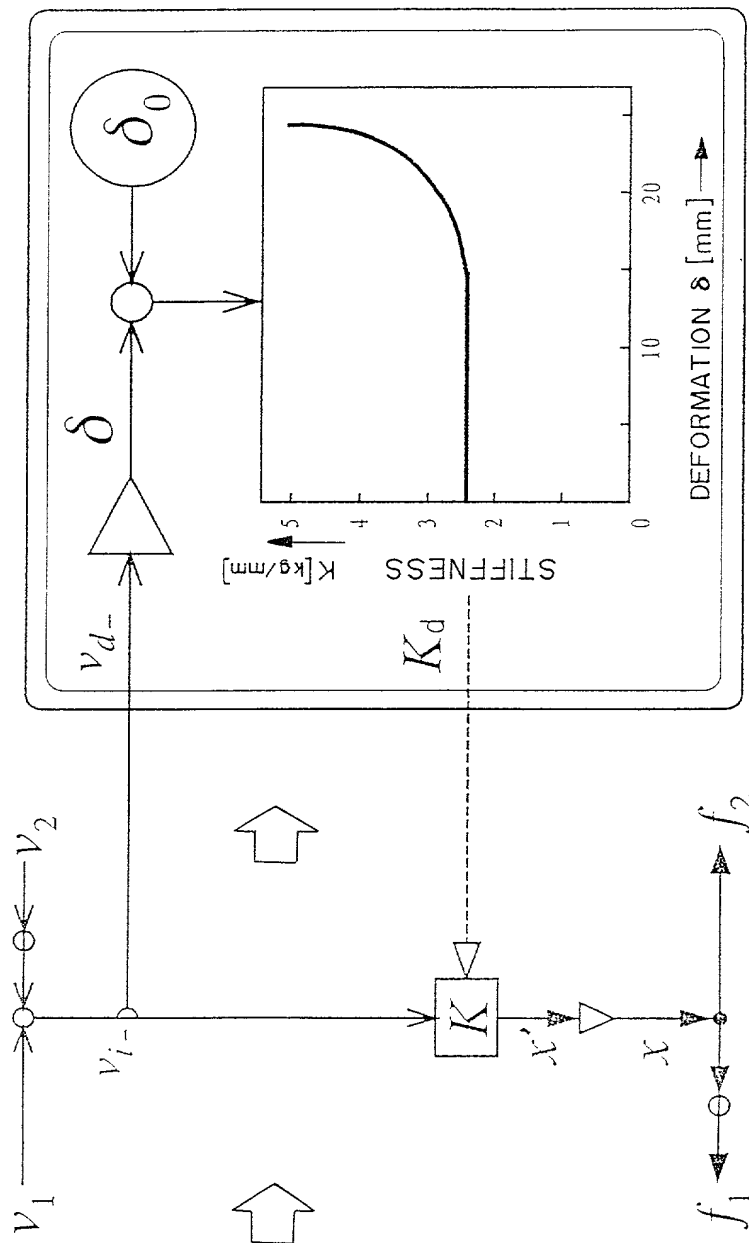


Fig.15

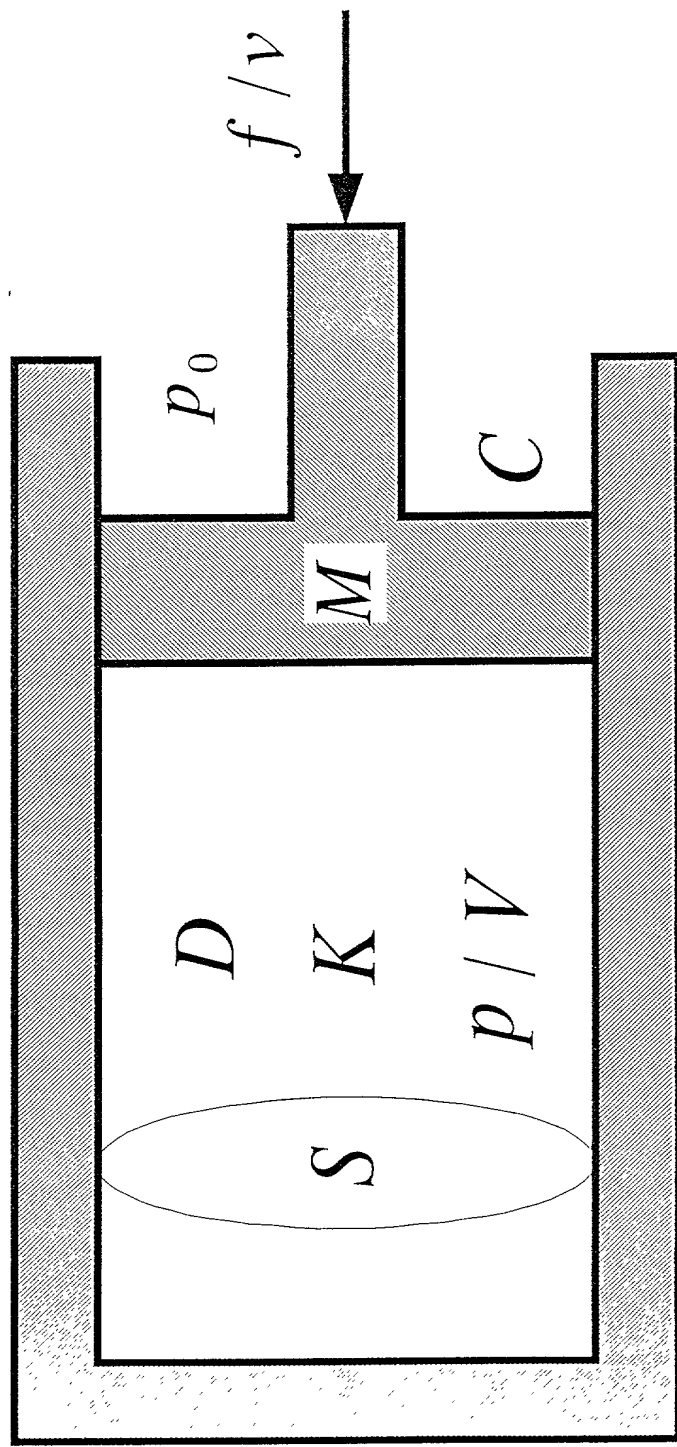


Fig.16

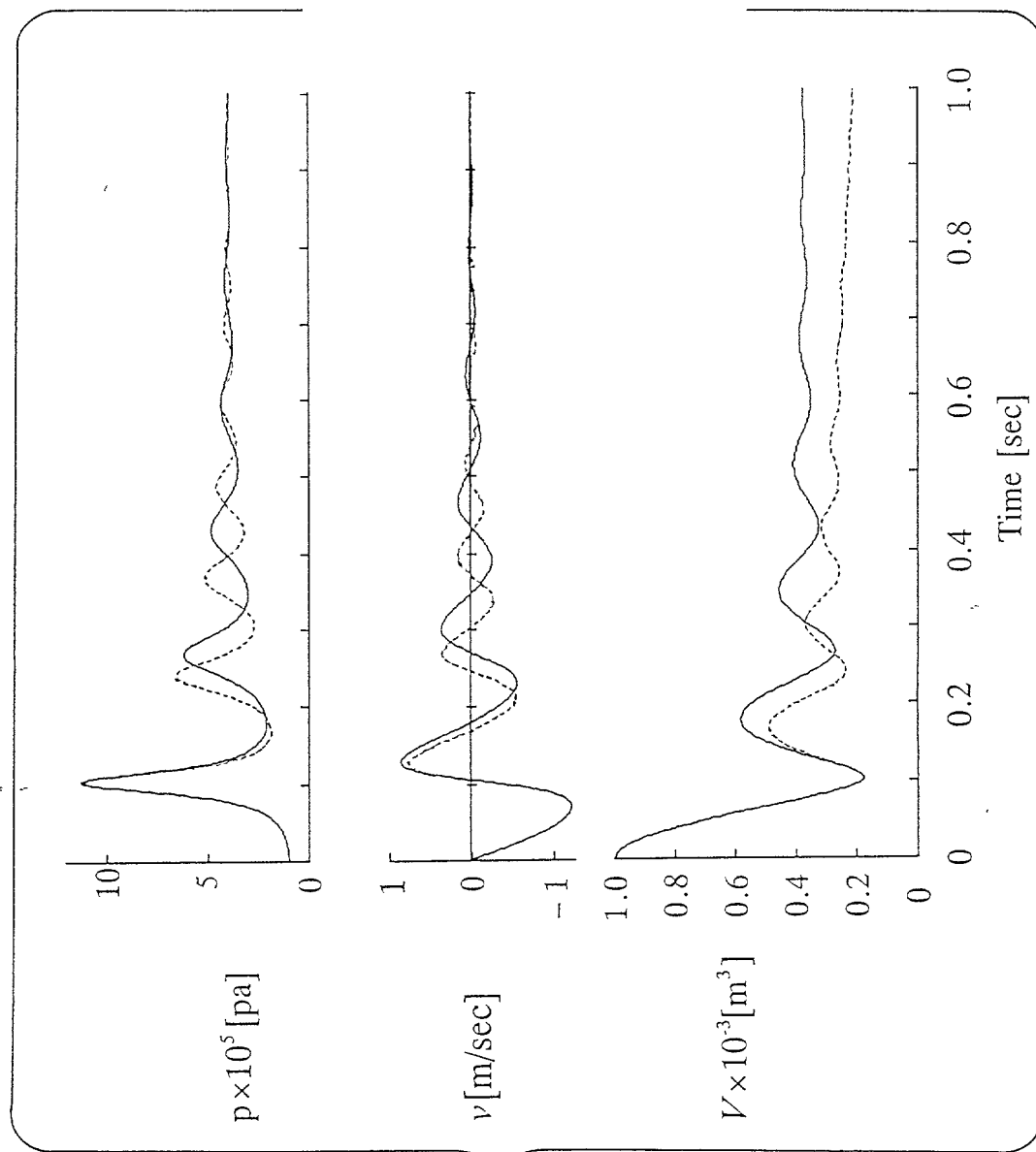


Fig.18

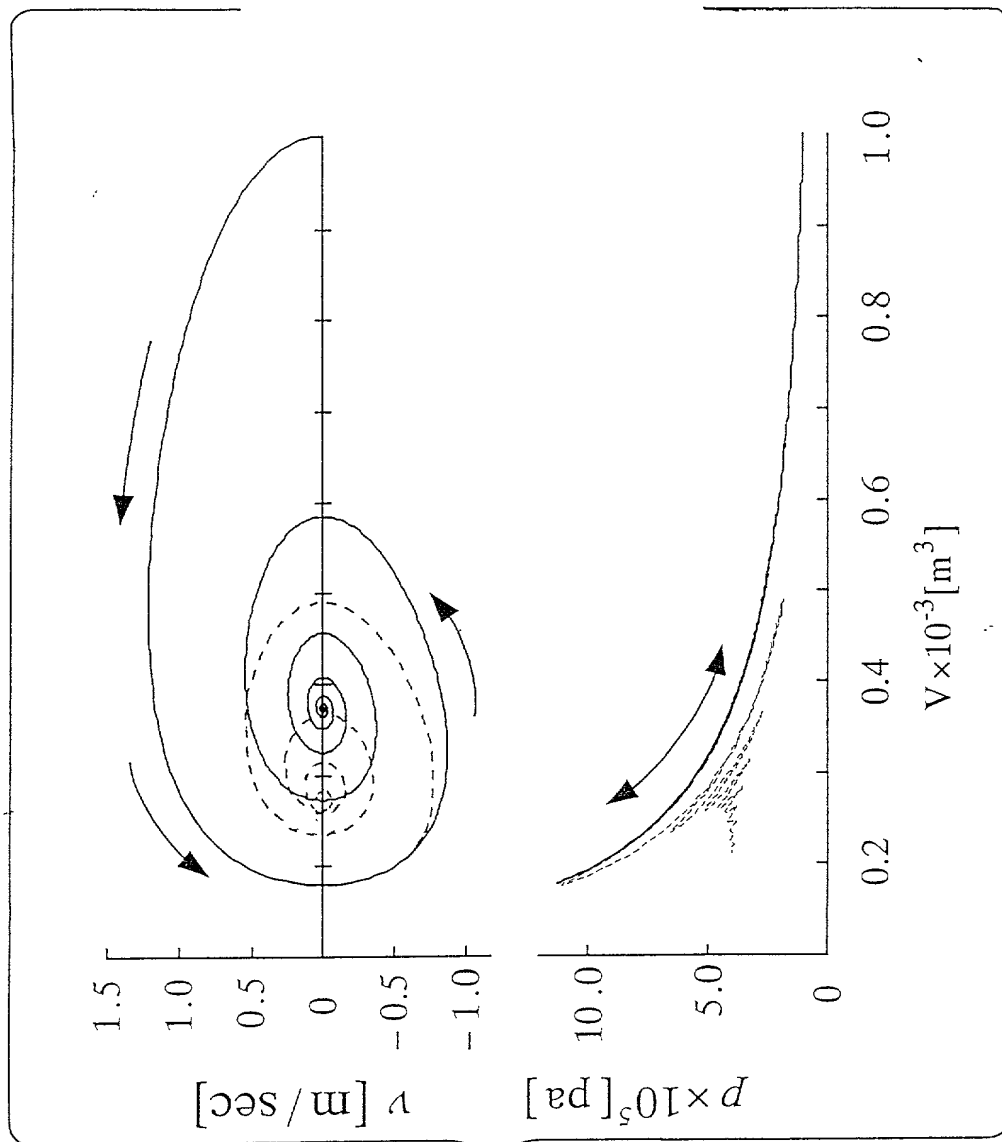


Fig.19

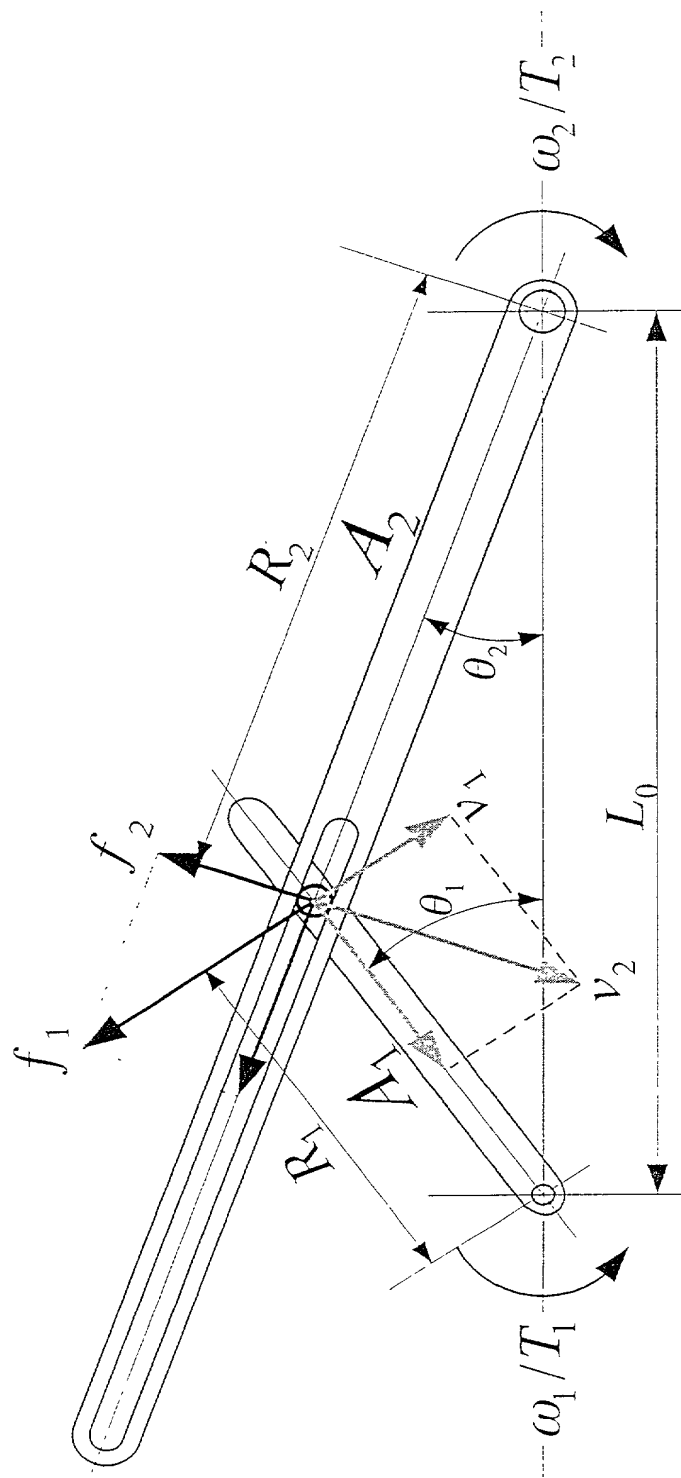


Fig.20

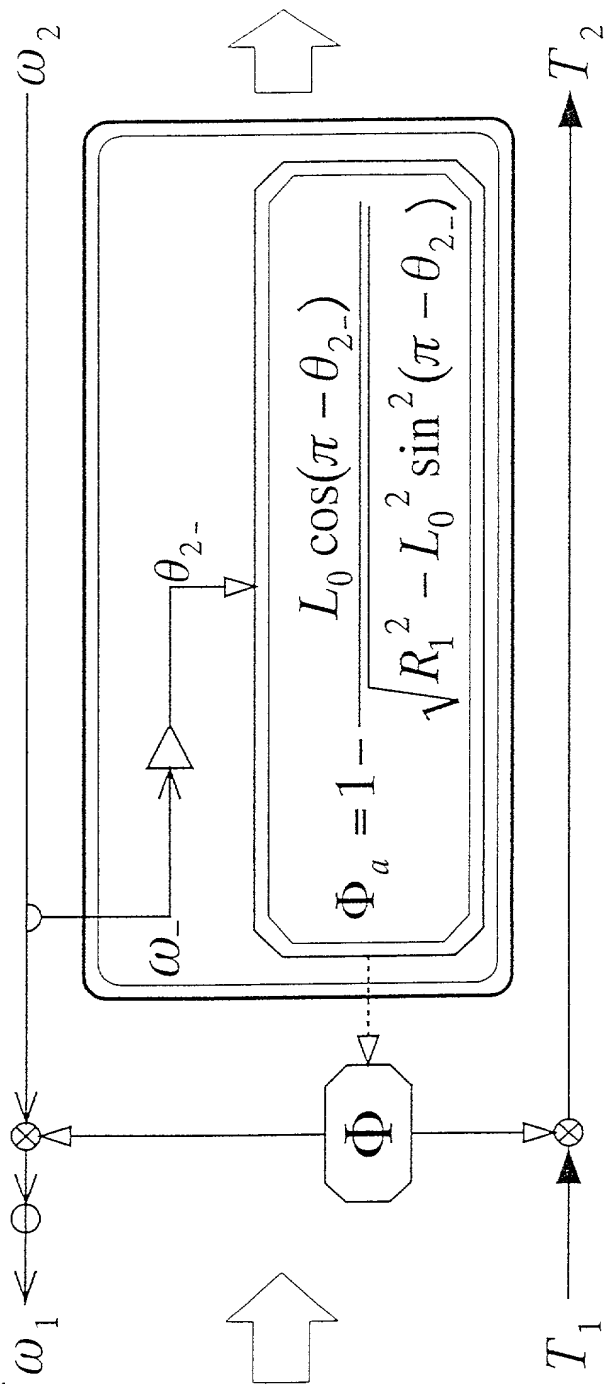


Fig.21

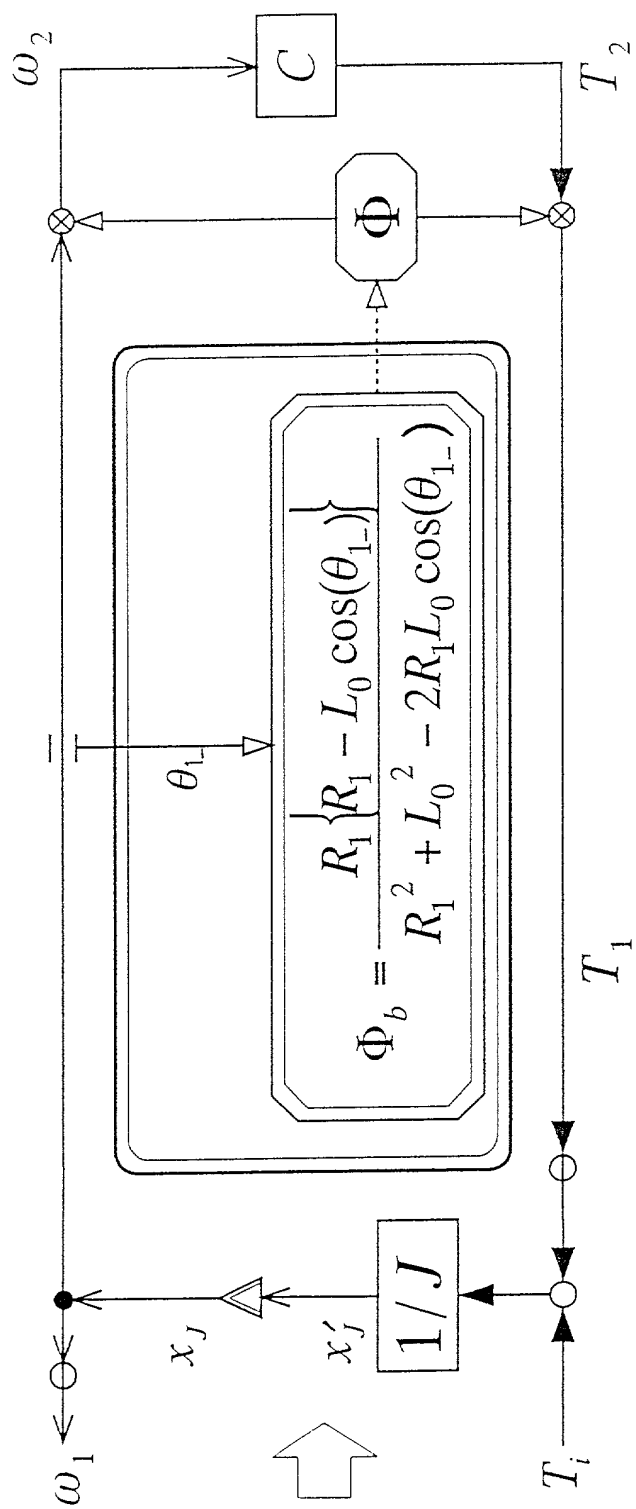
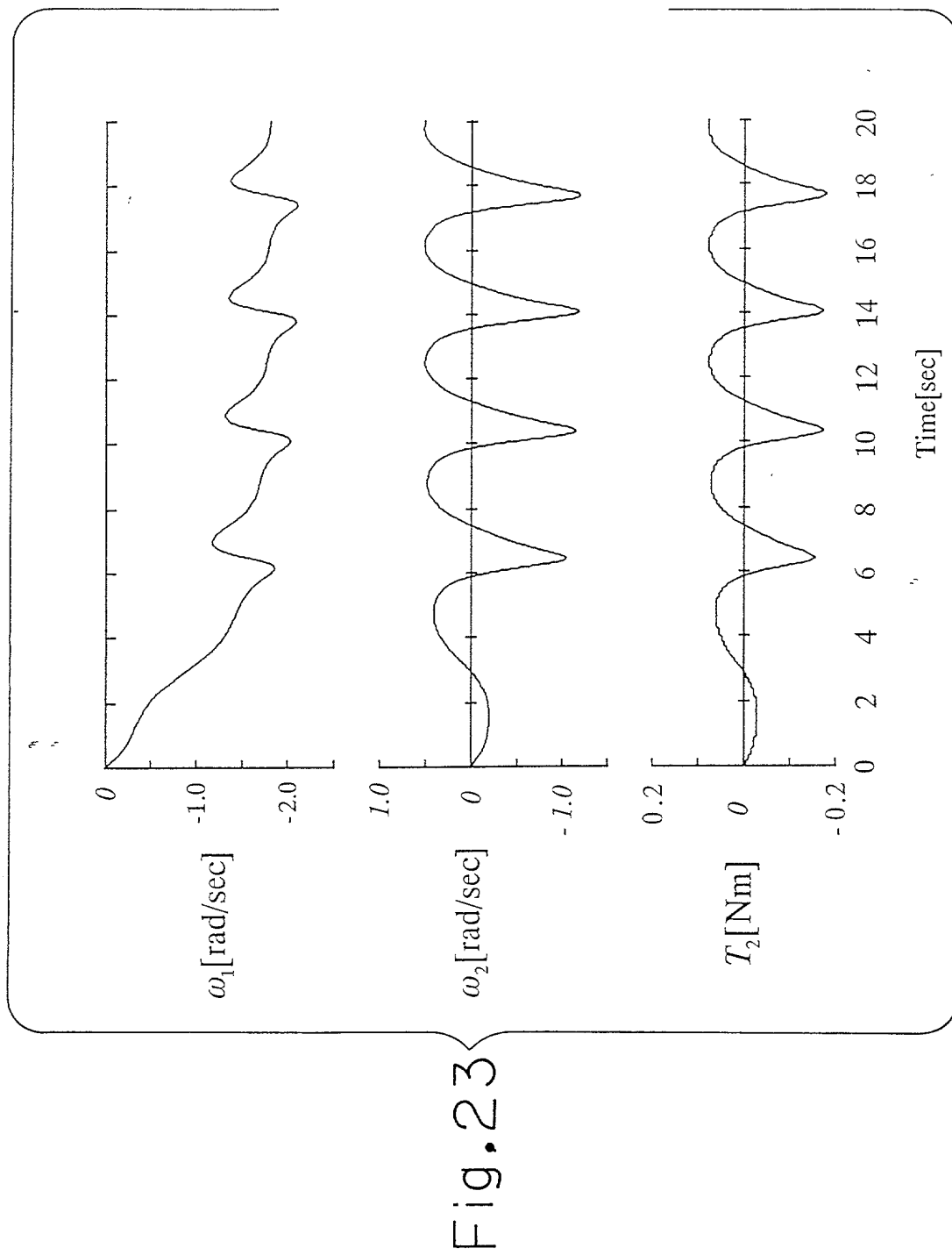


Fig.22



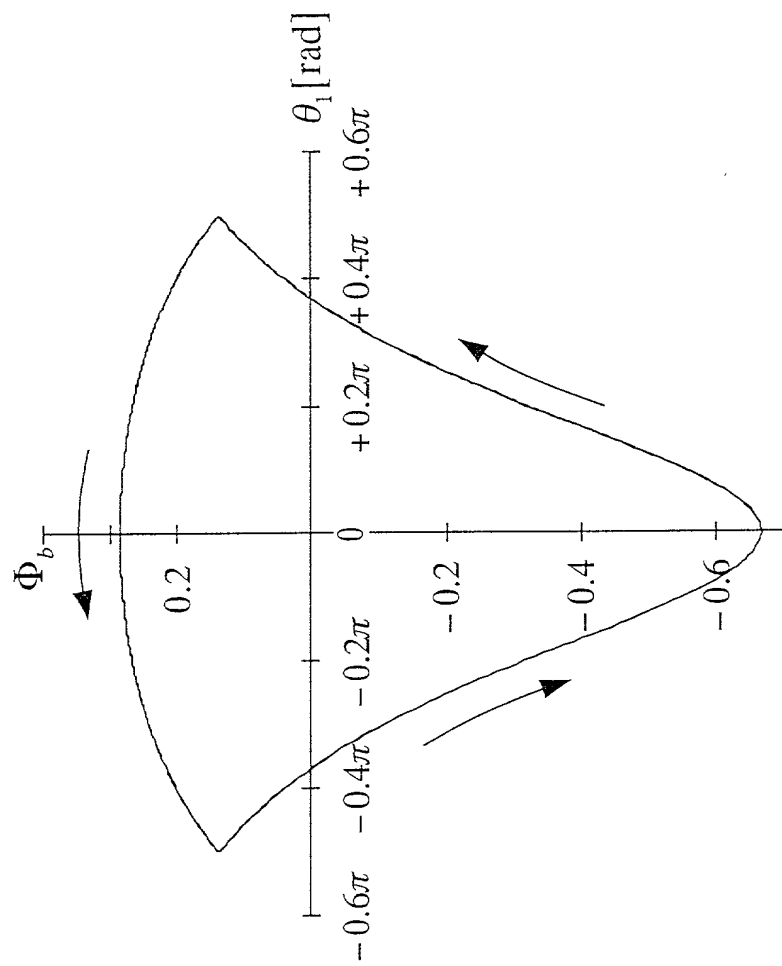


Fig.24

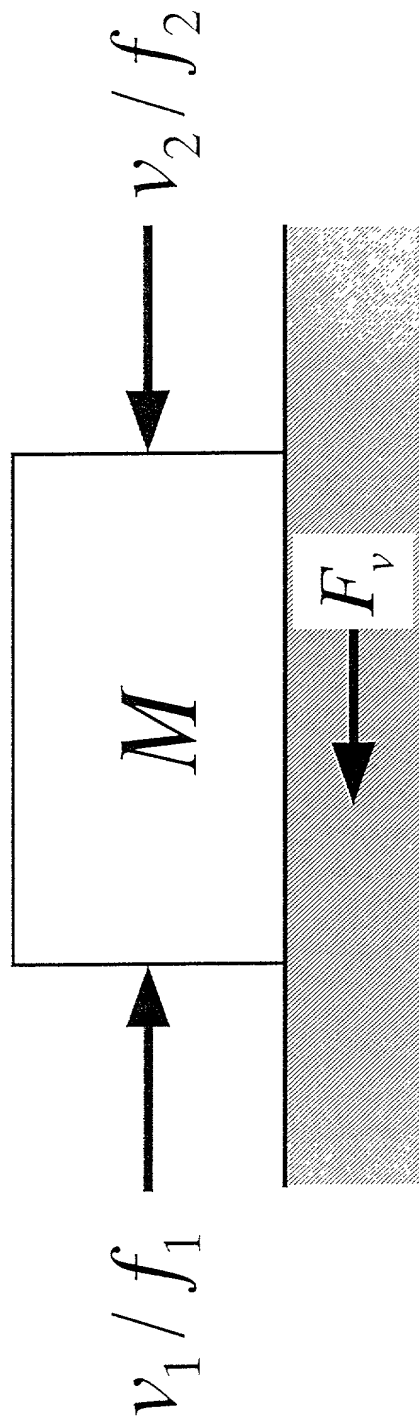


Fig.25

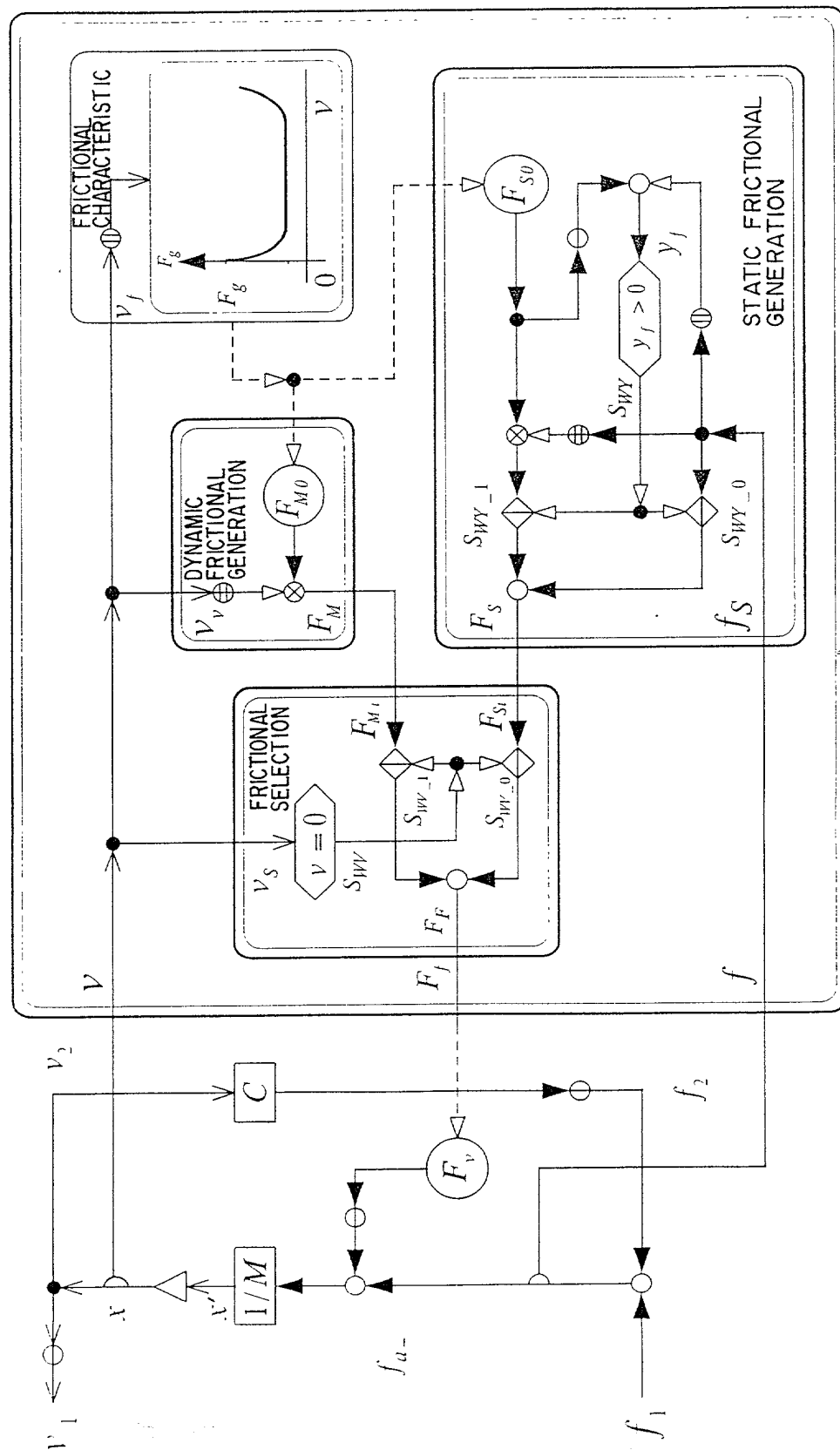


Fig.26

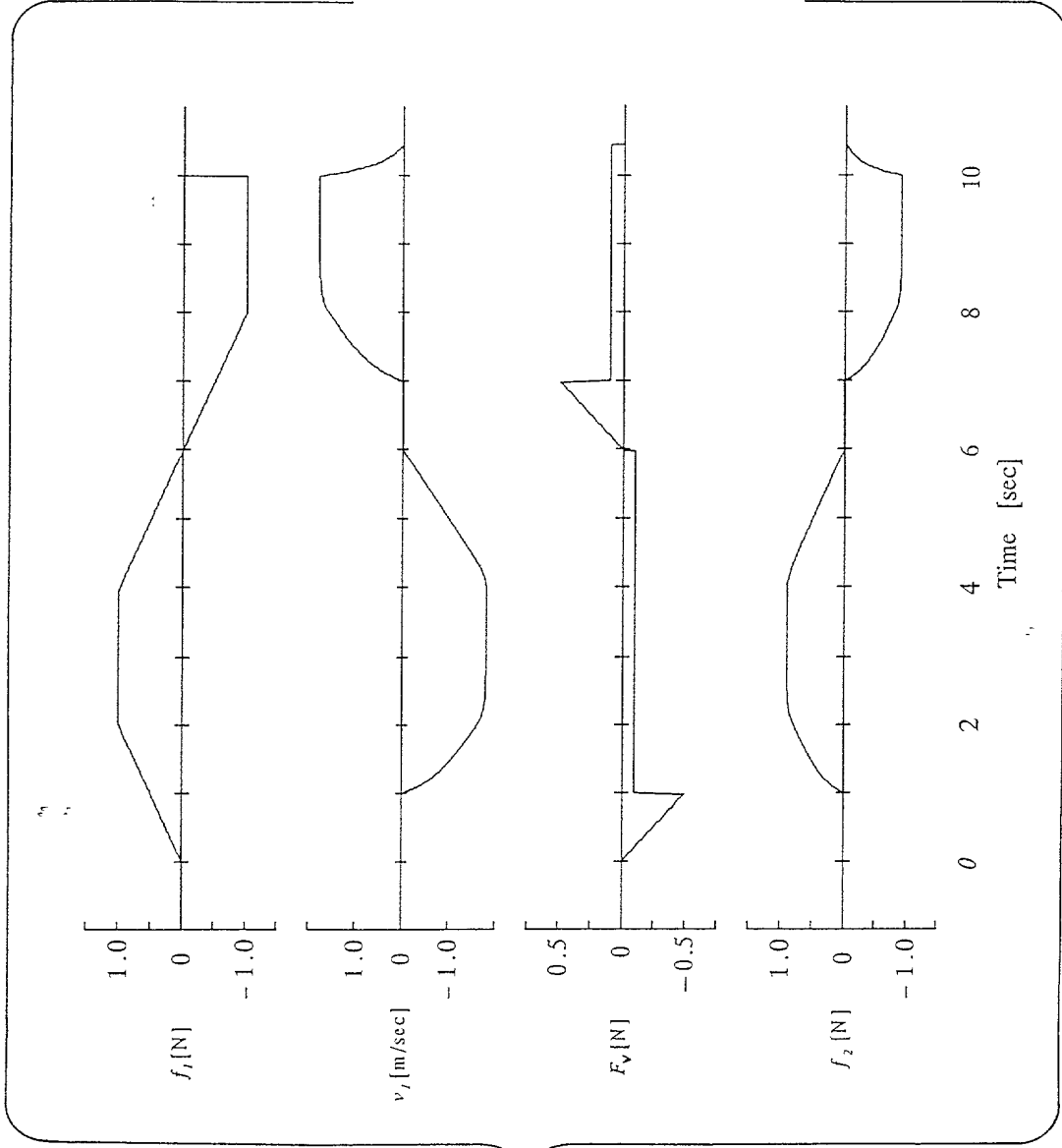


Fig.27

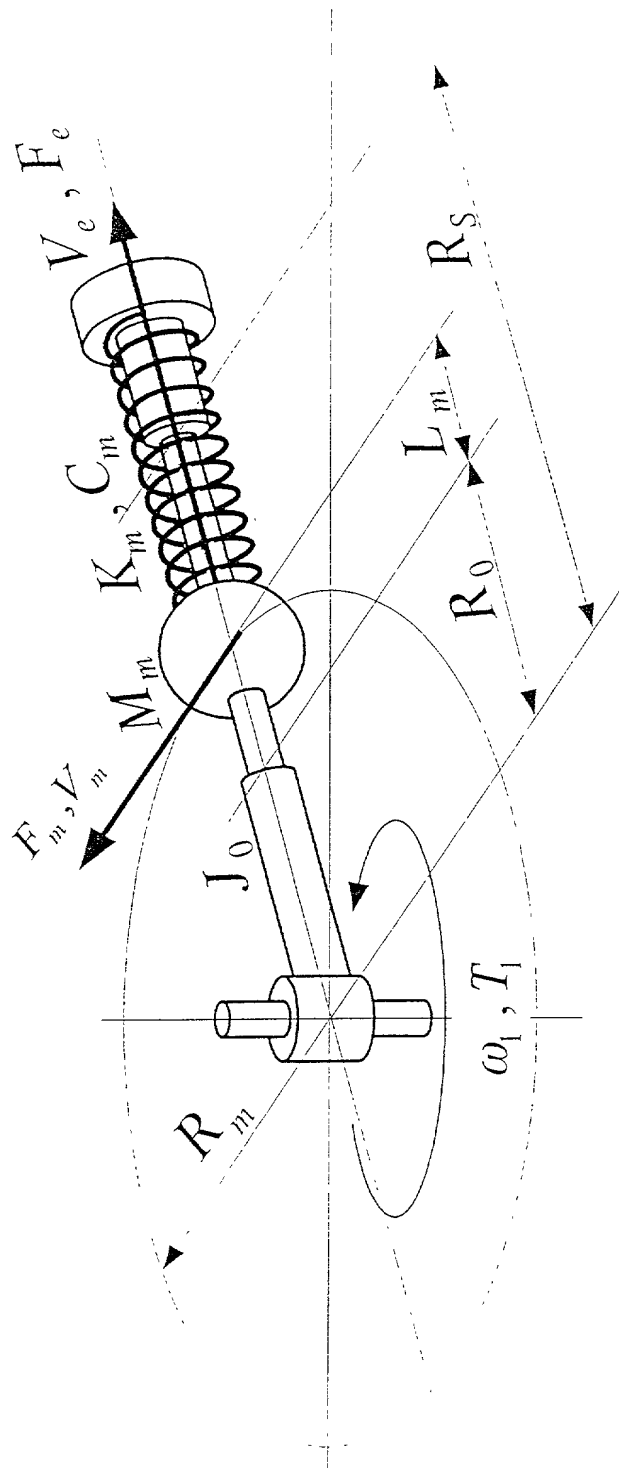


Fig.28

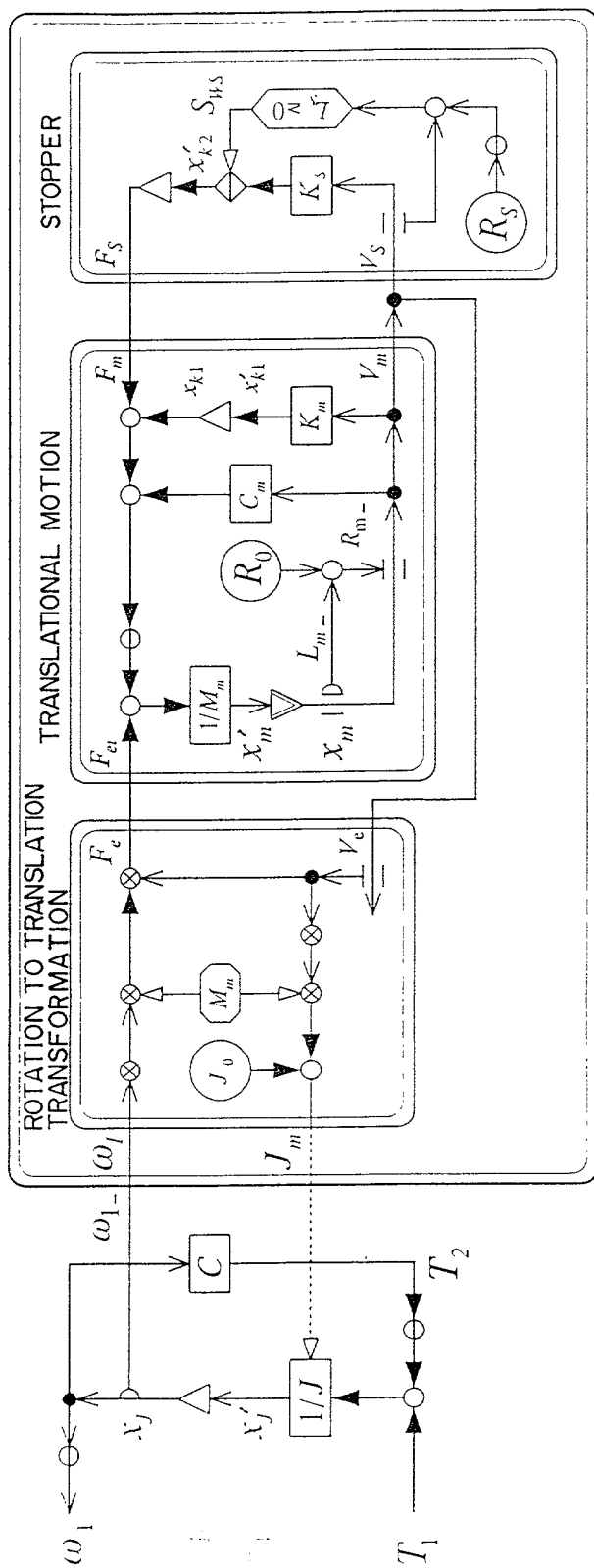


Fig.29

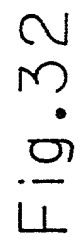
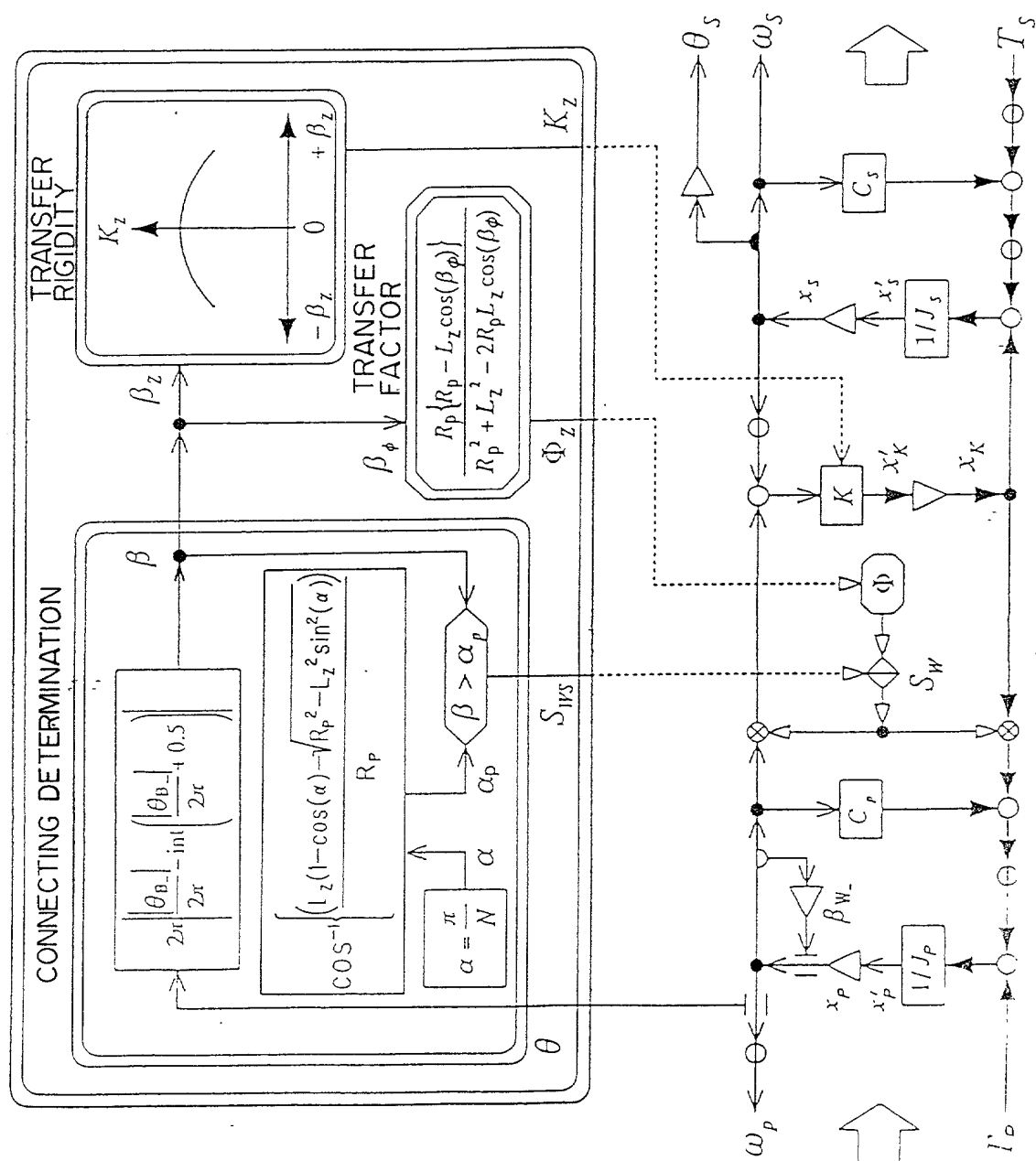


Fig. 32



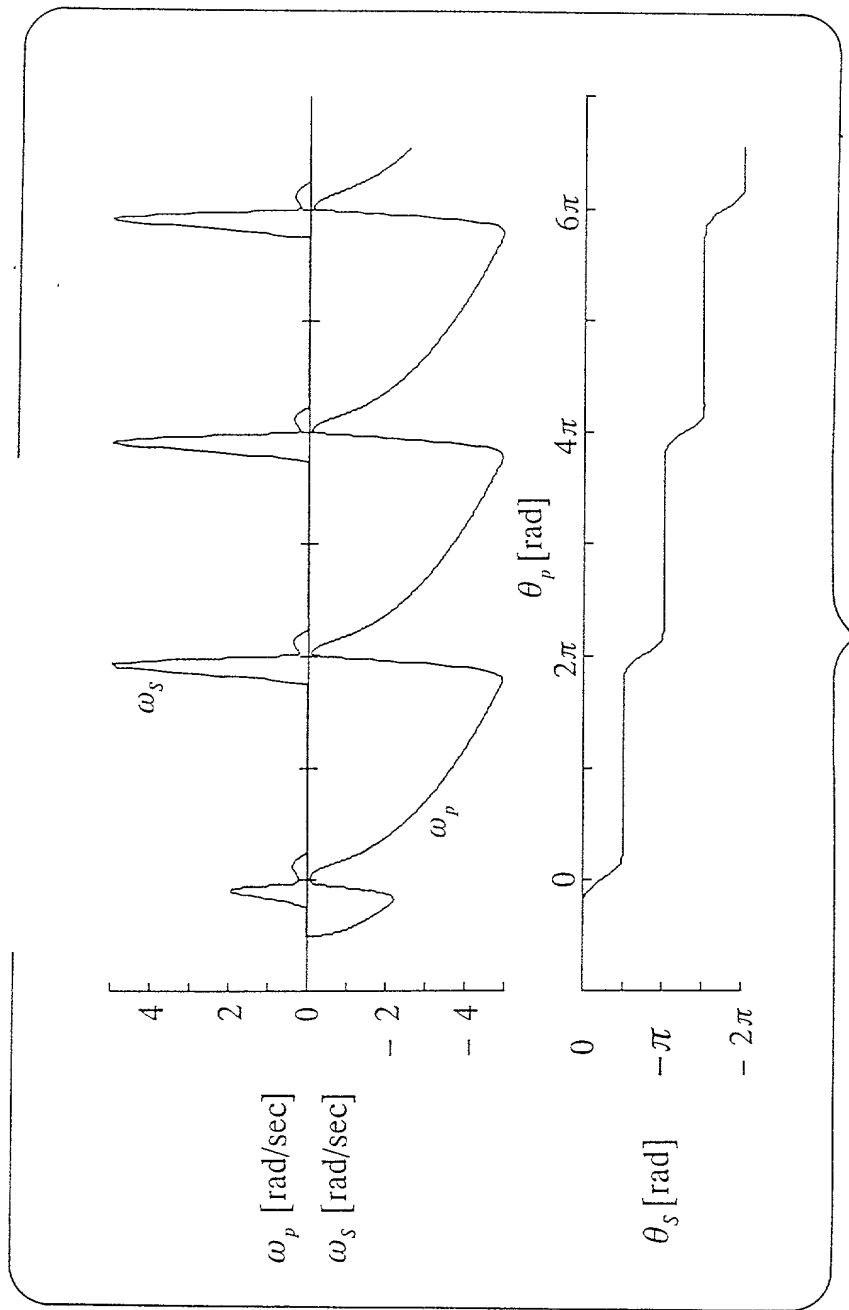


Fig. 35

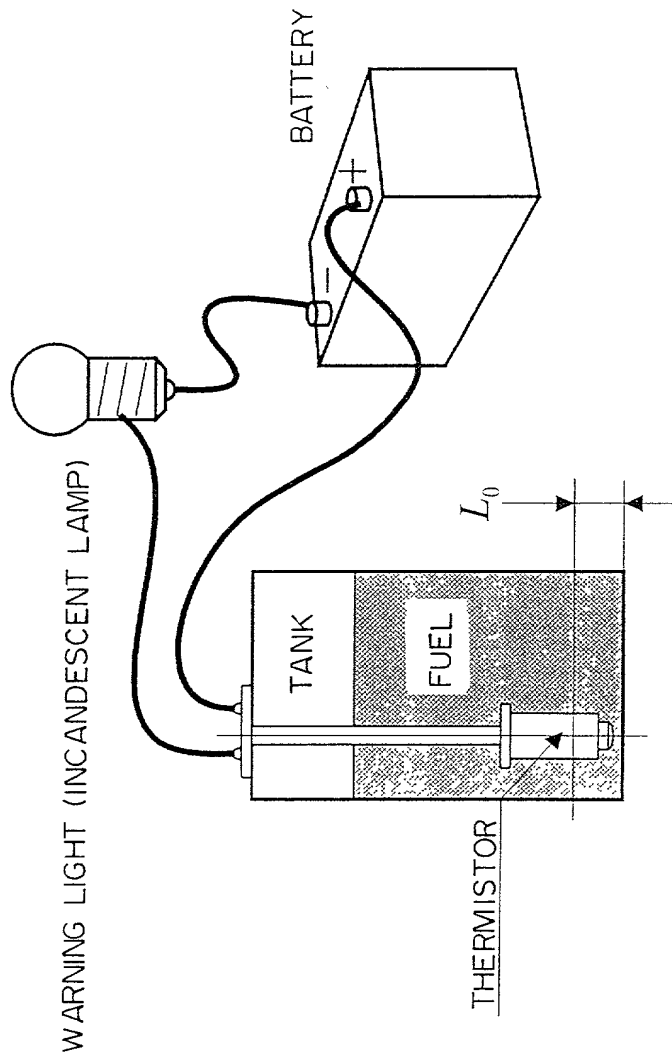


Fig. 36

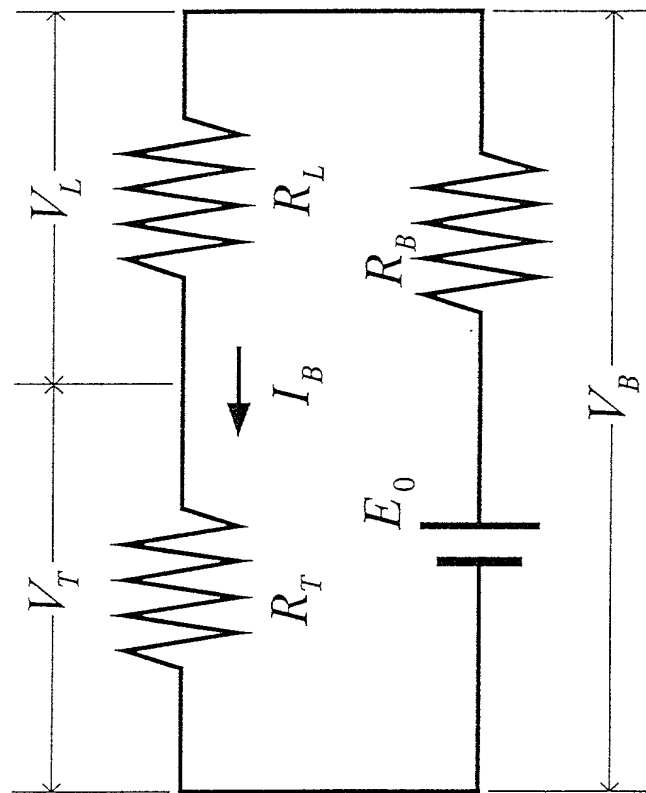


Fig. 37

24

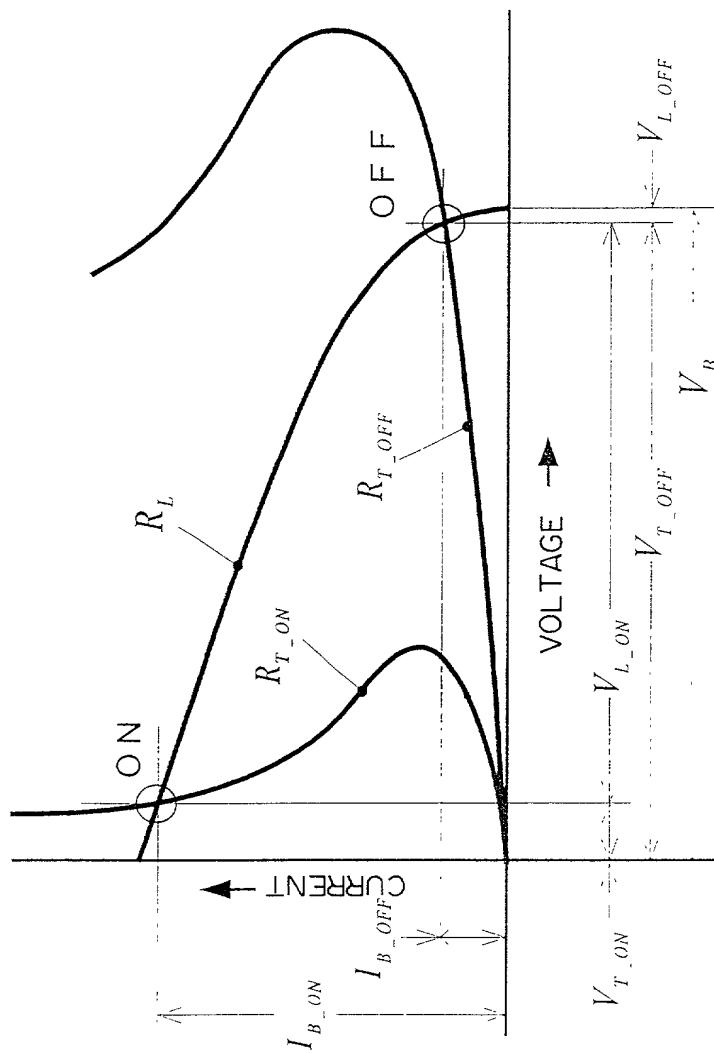


Fig.38

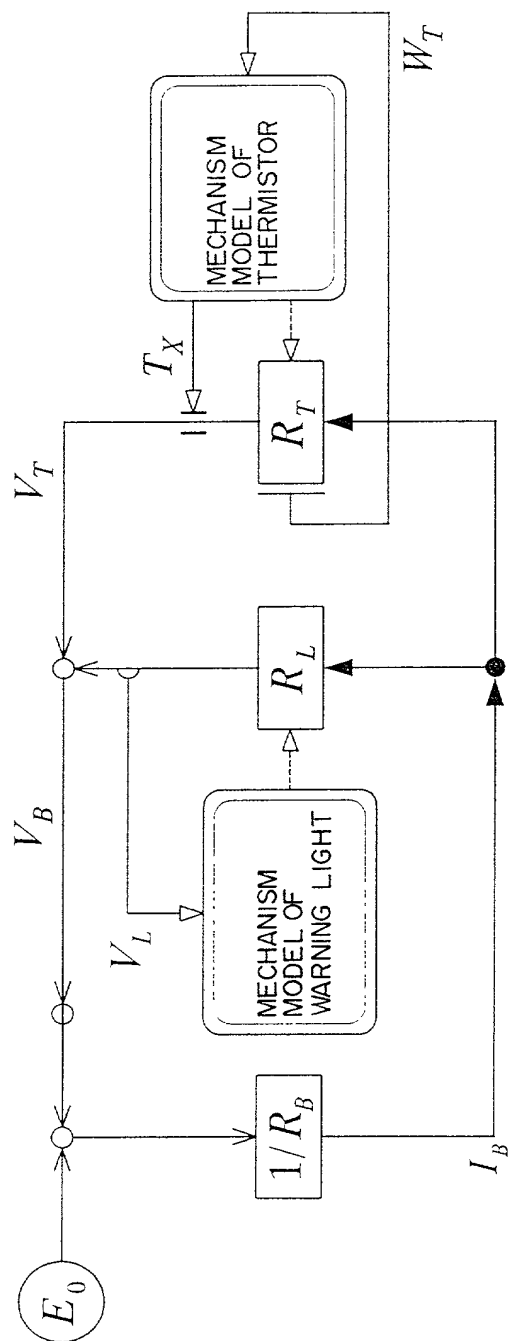


Fig. 39

11

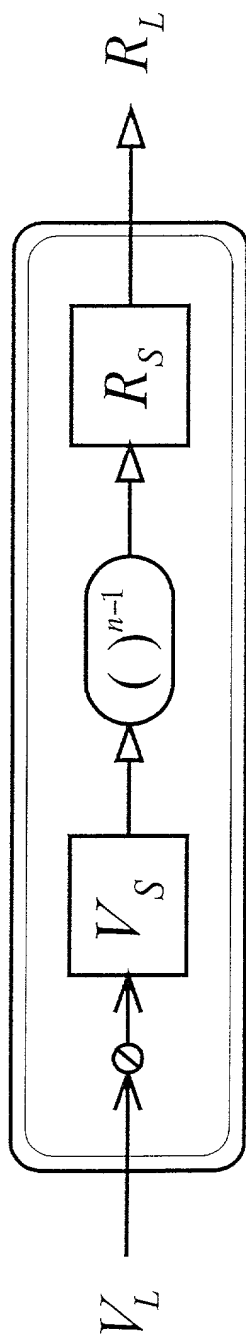


Fig.40

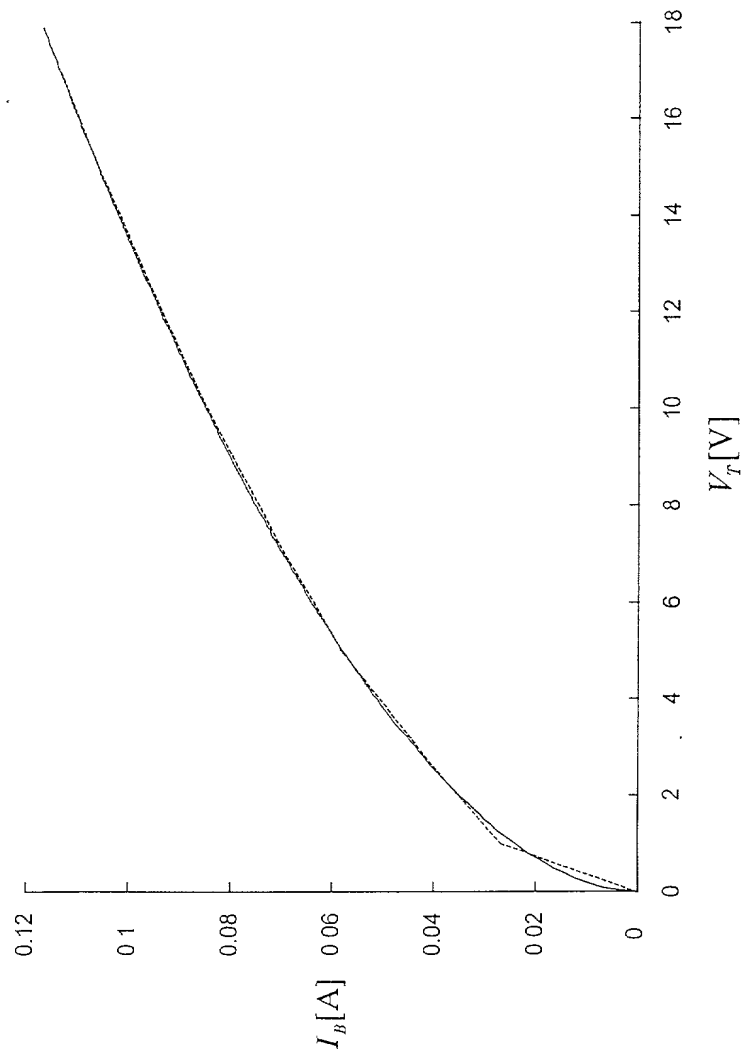


Fig.41

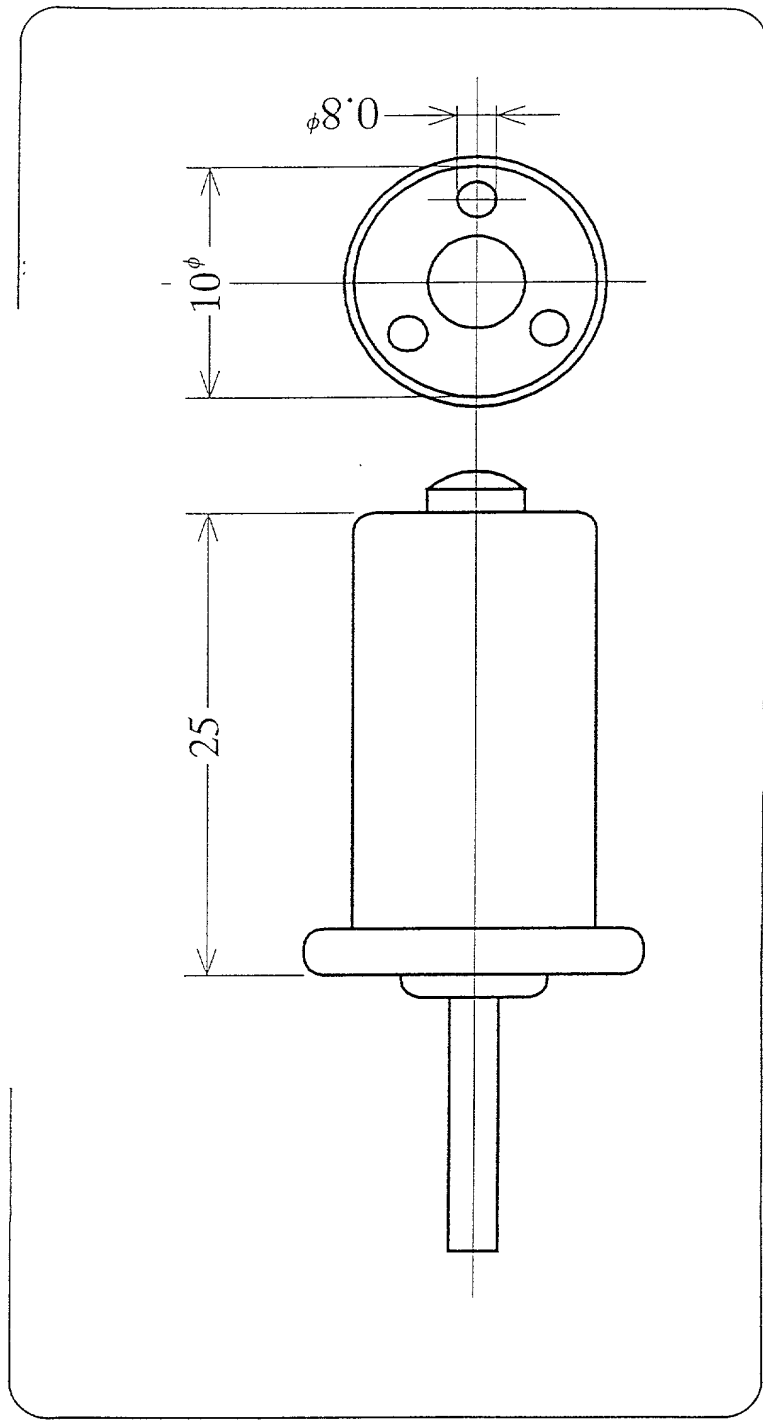


Fig.42

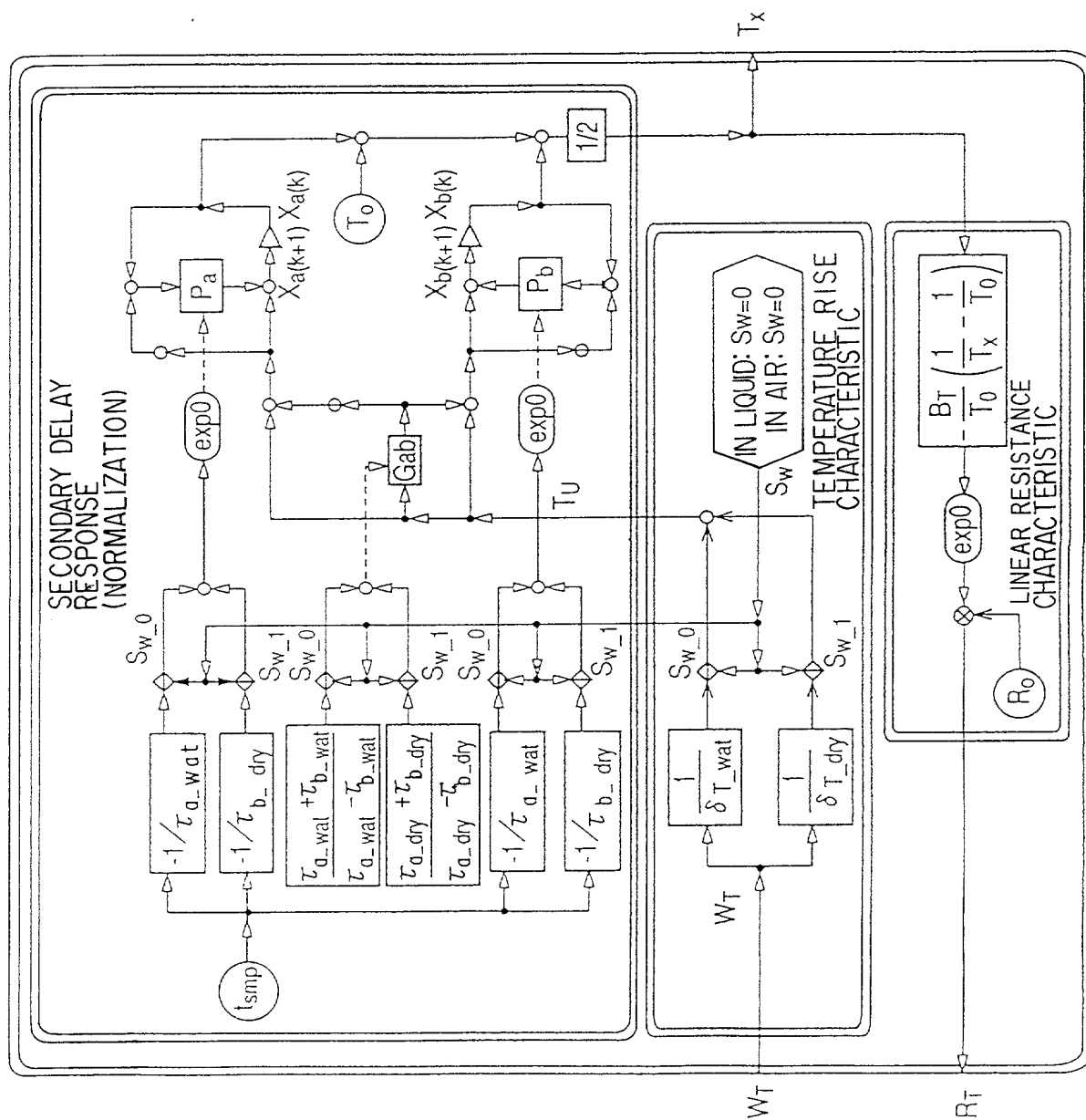


Fig.43

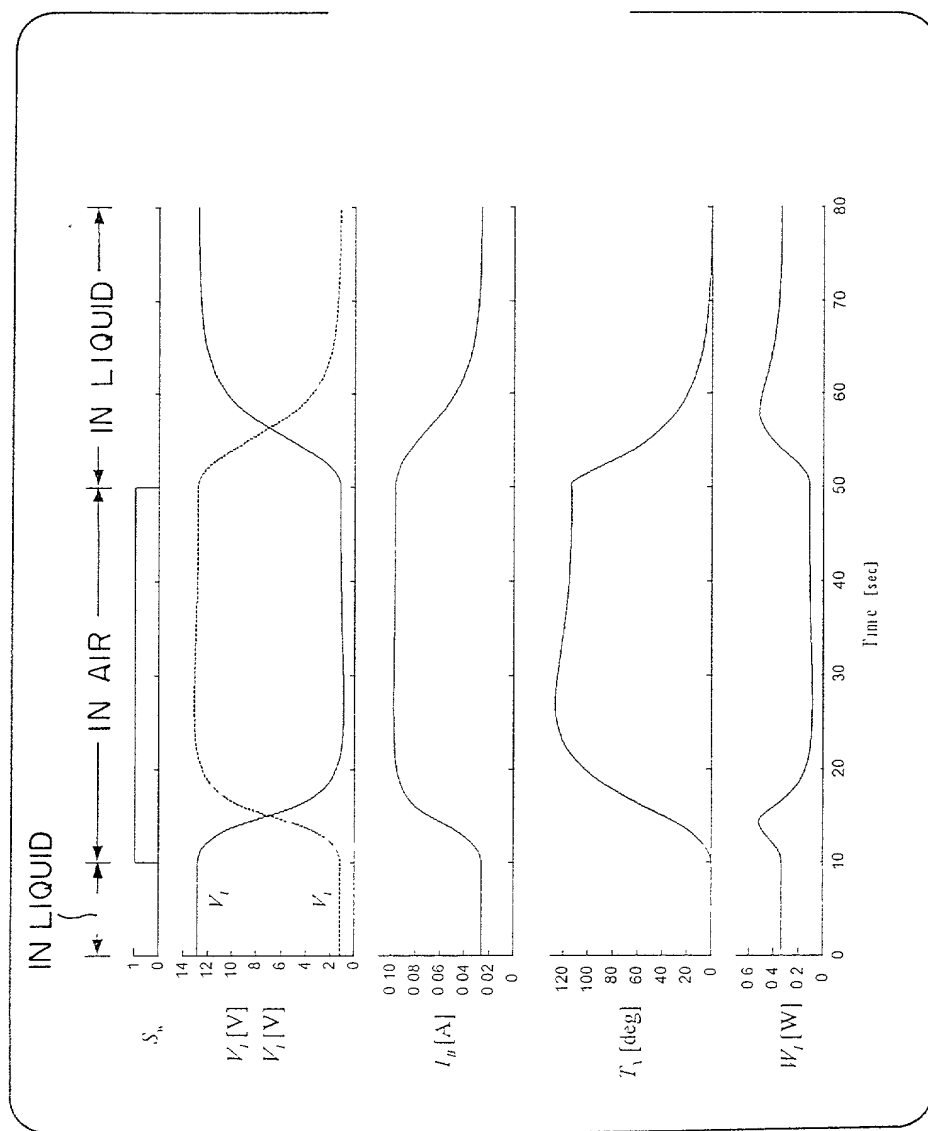


Fig. 4.4

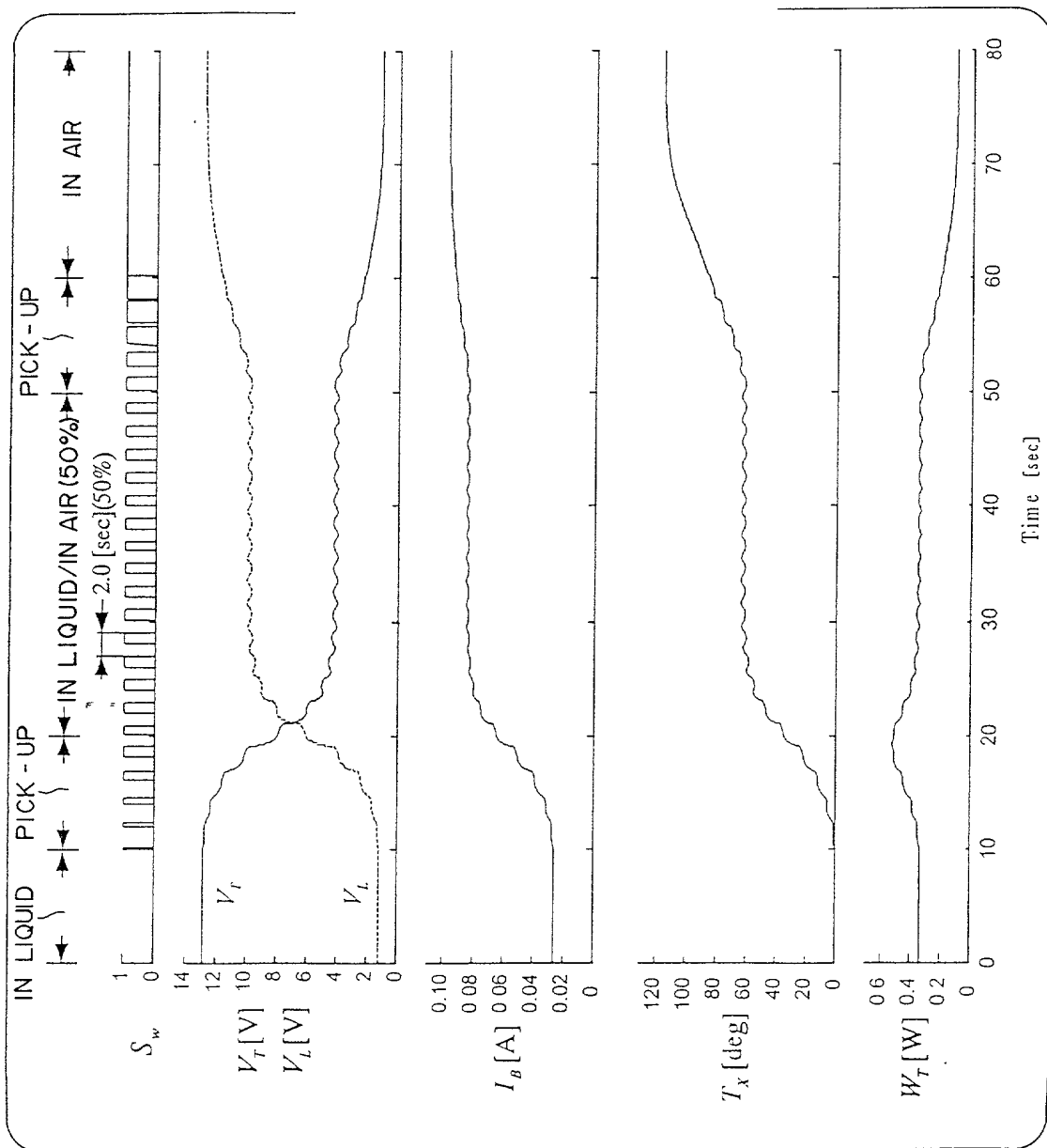


Fig.45

10

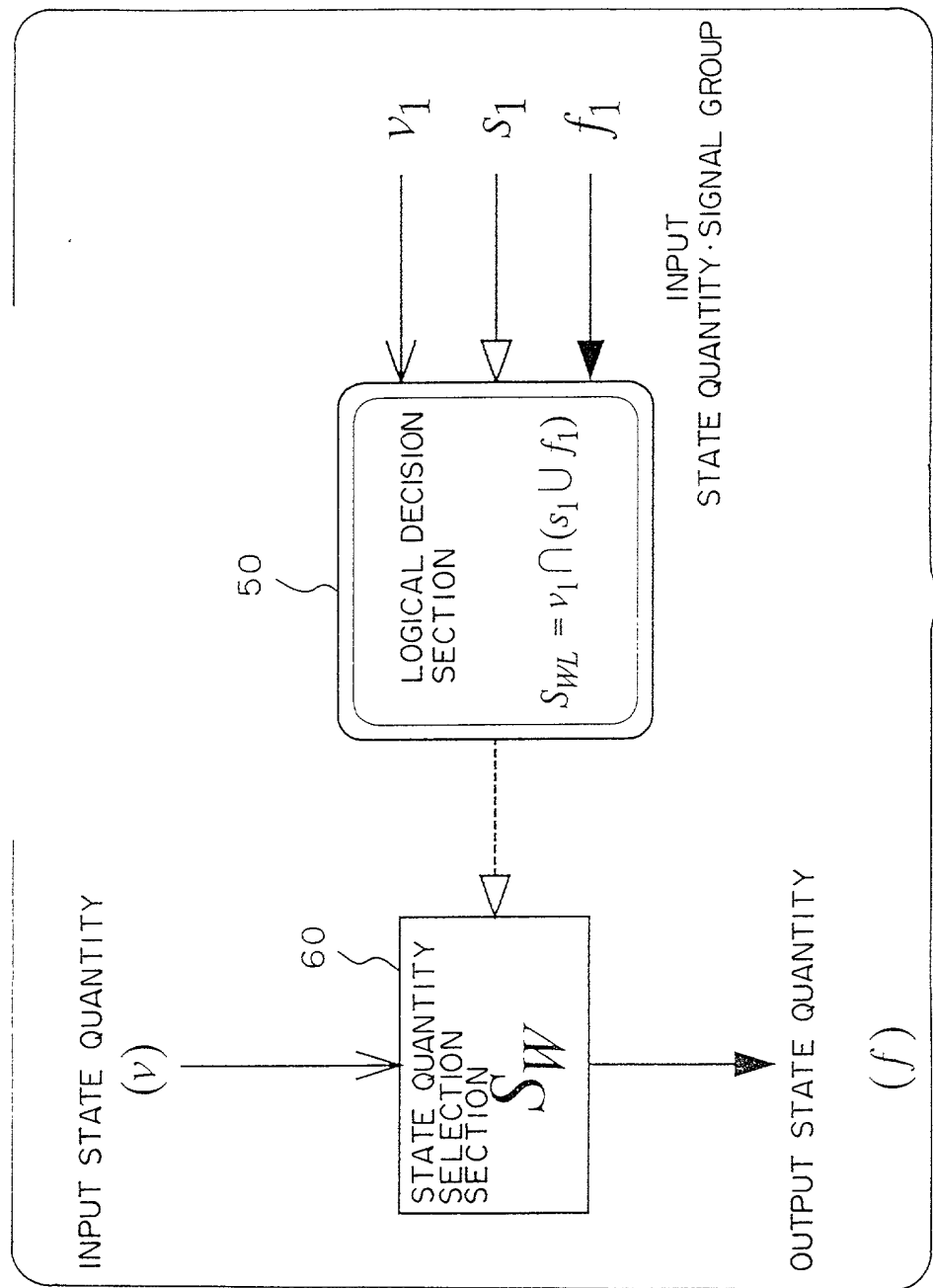


Fig. 46

23

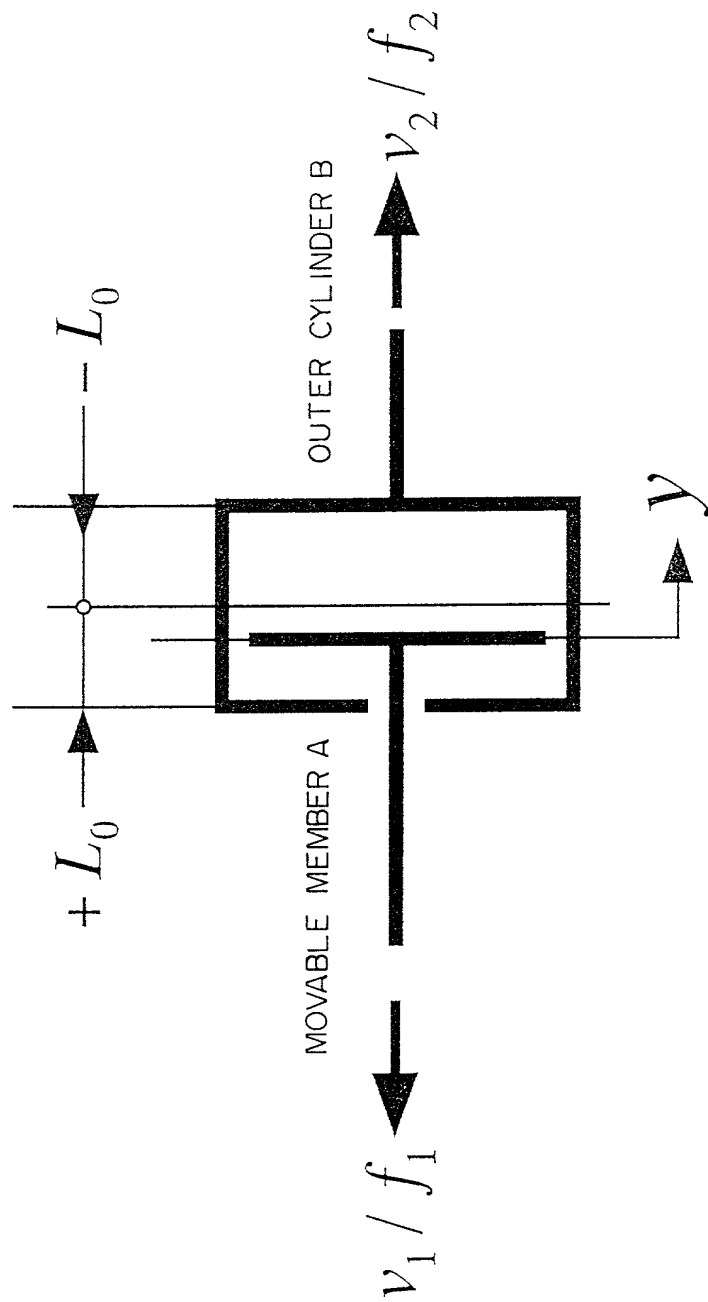


Fig. 47

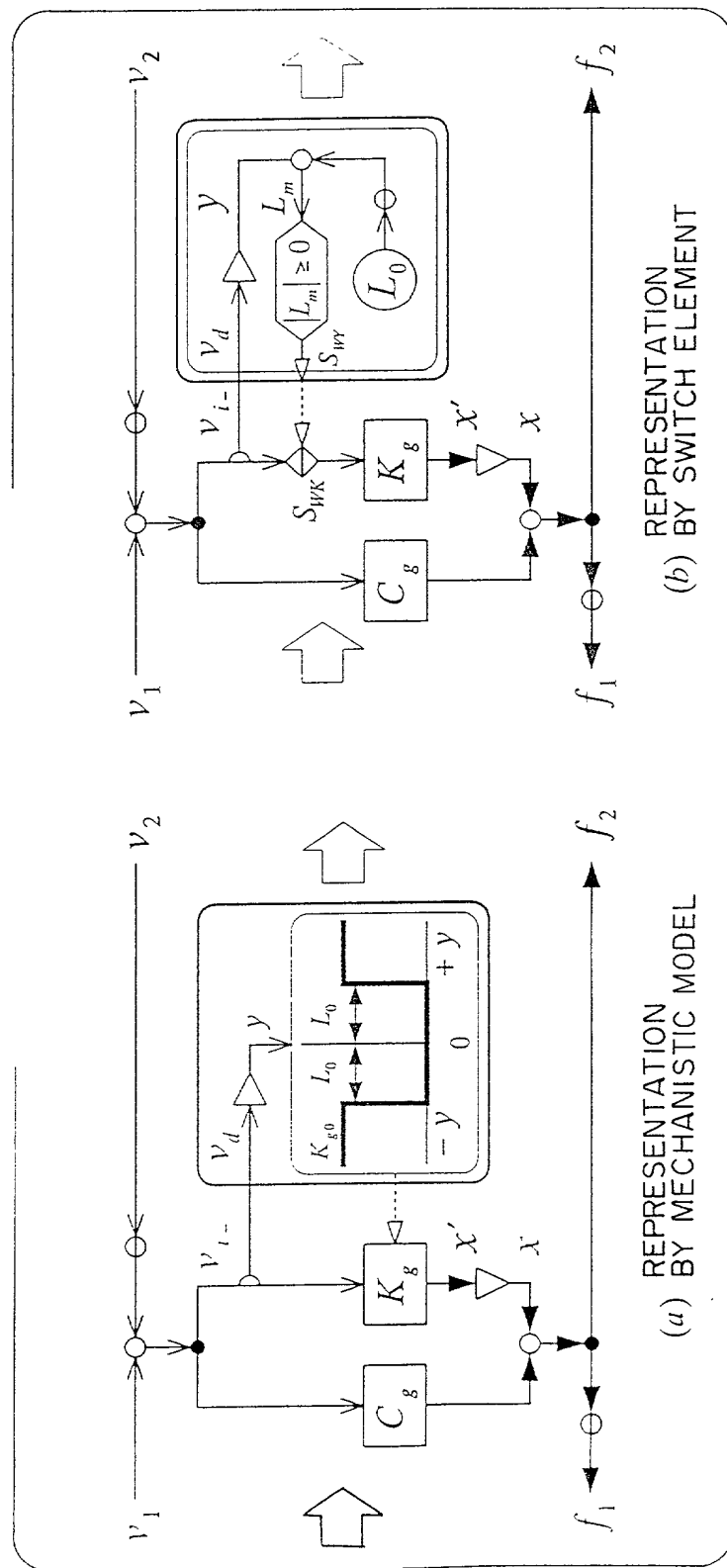


Fig. 48

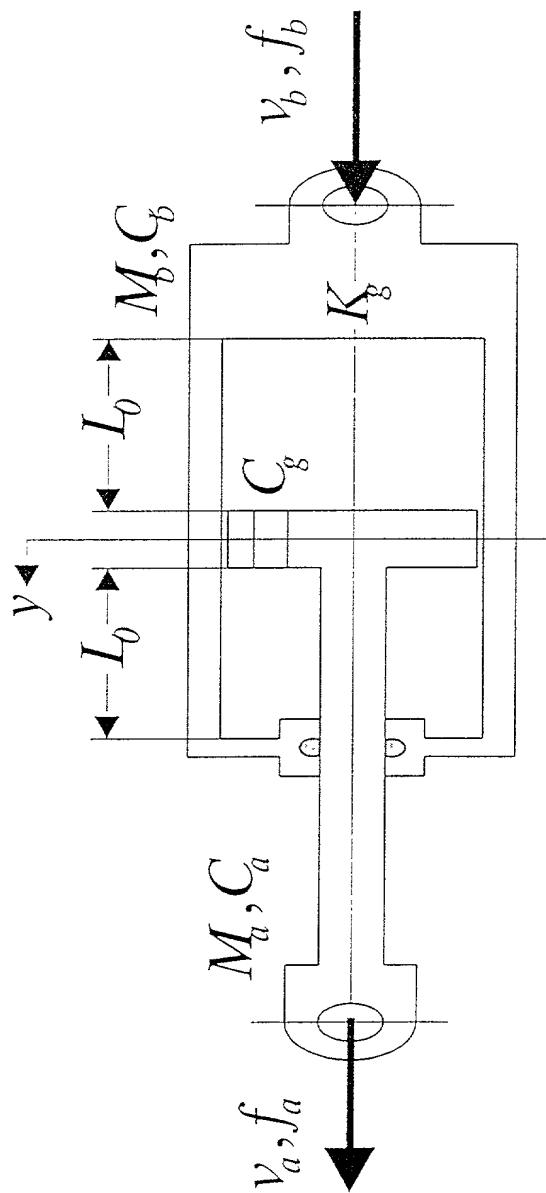


Fig.49

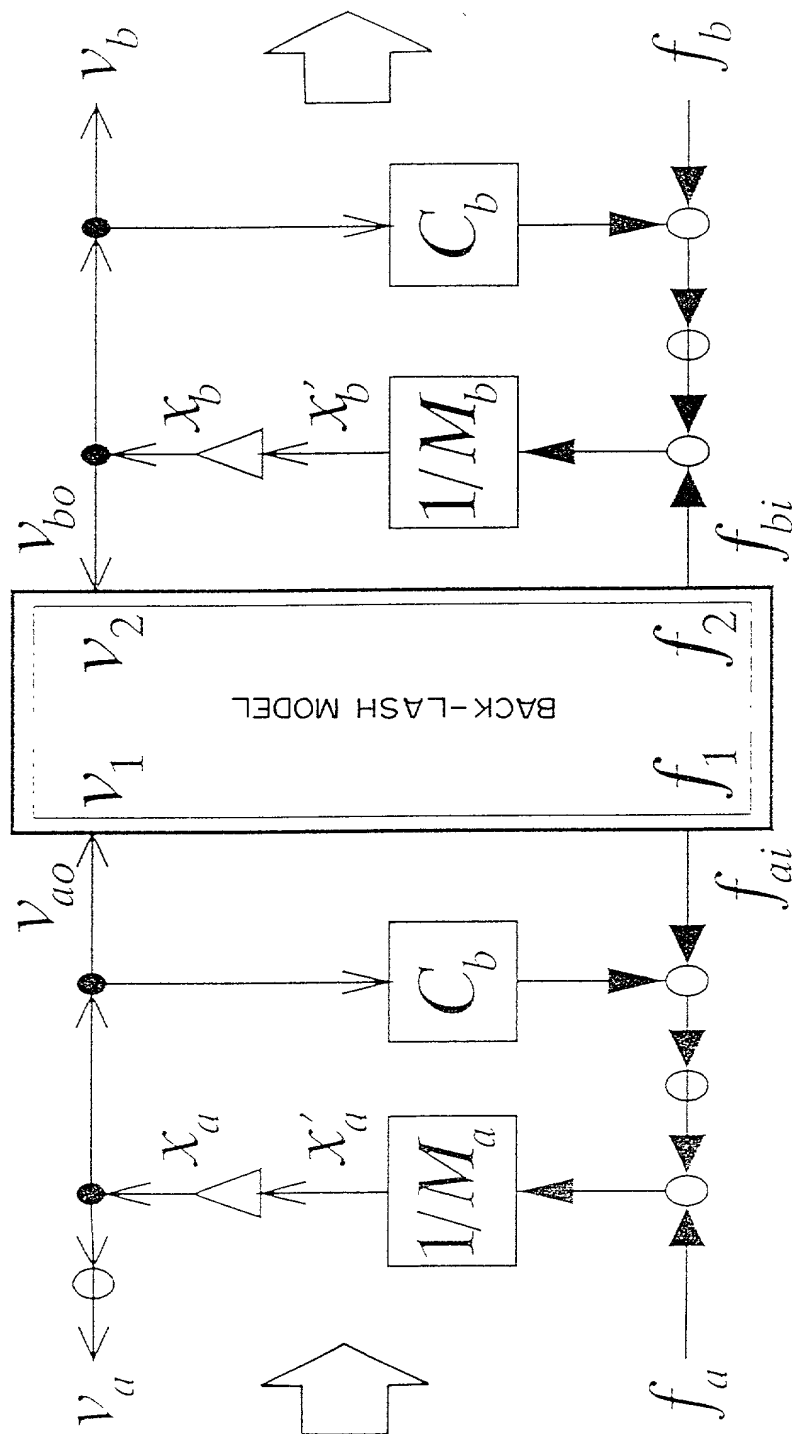
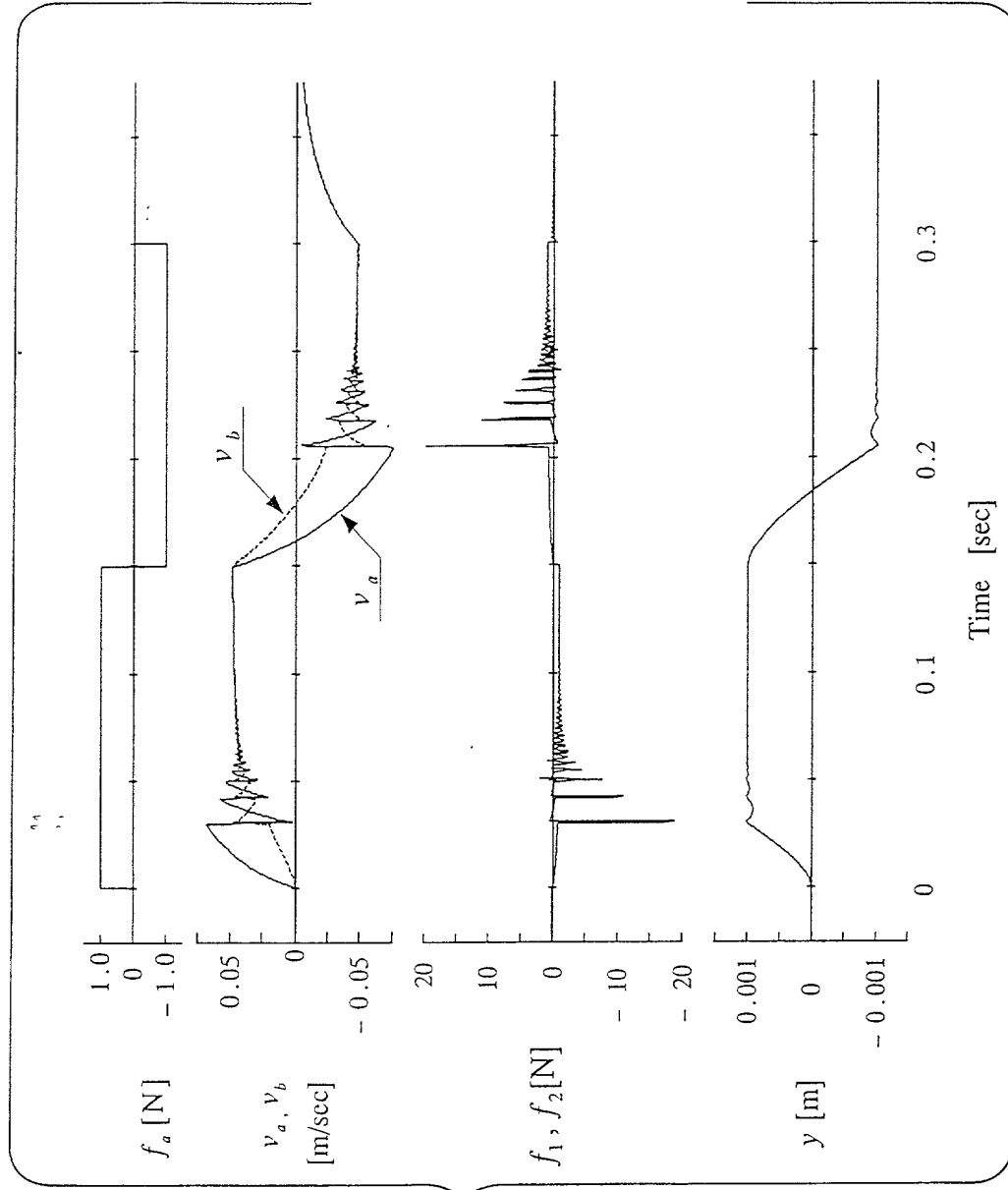


Fig. 50

Fig. 51



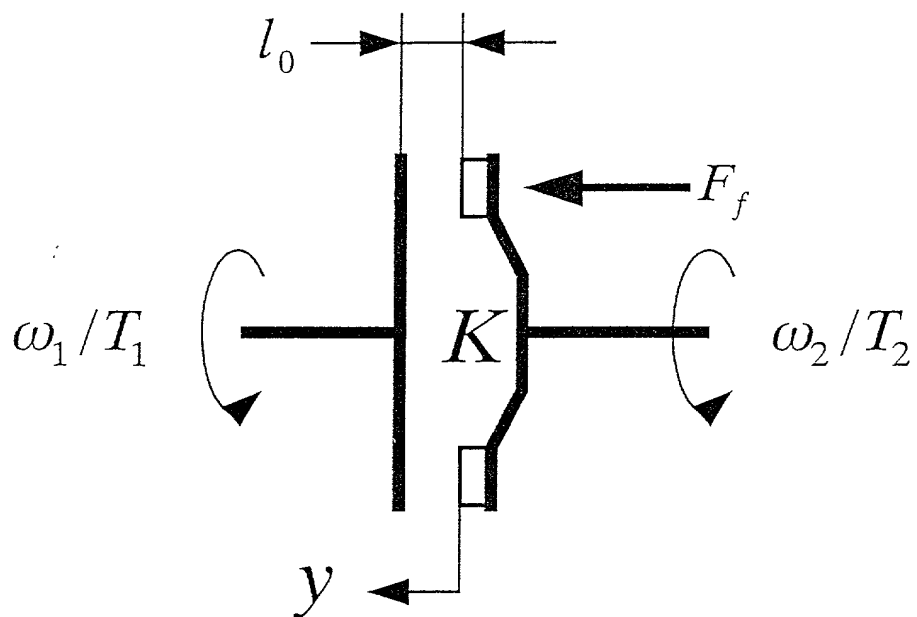


Fig.52

Fig. 53

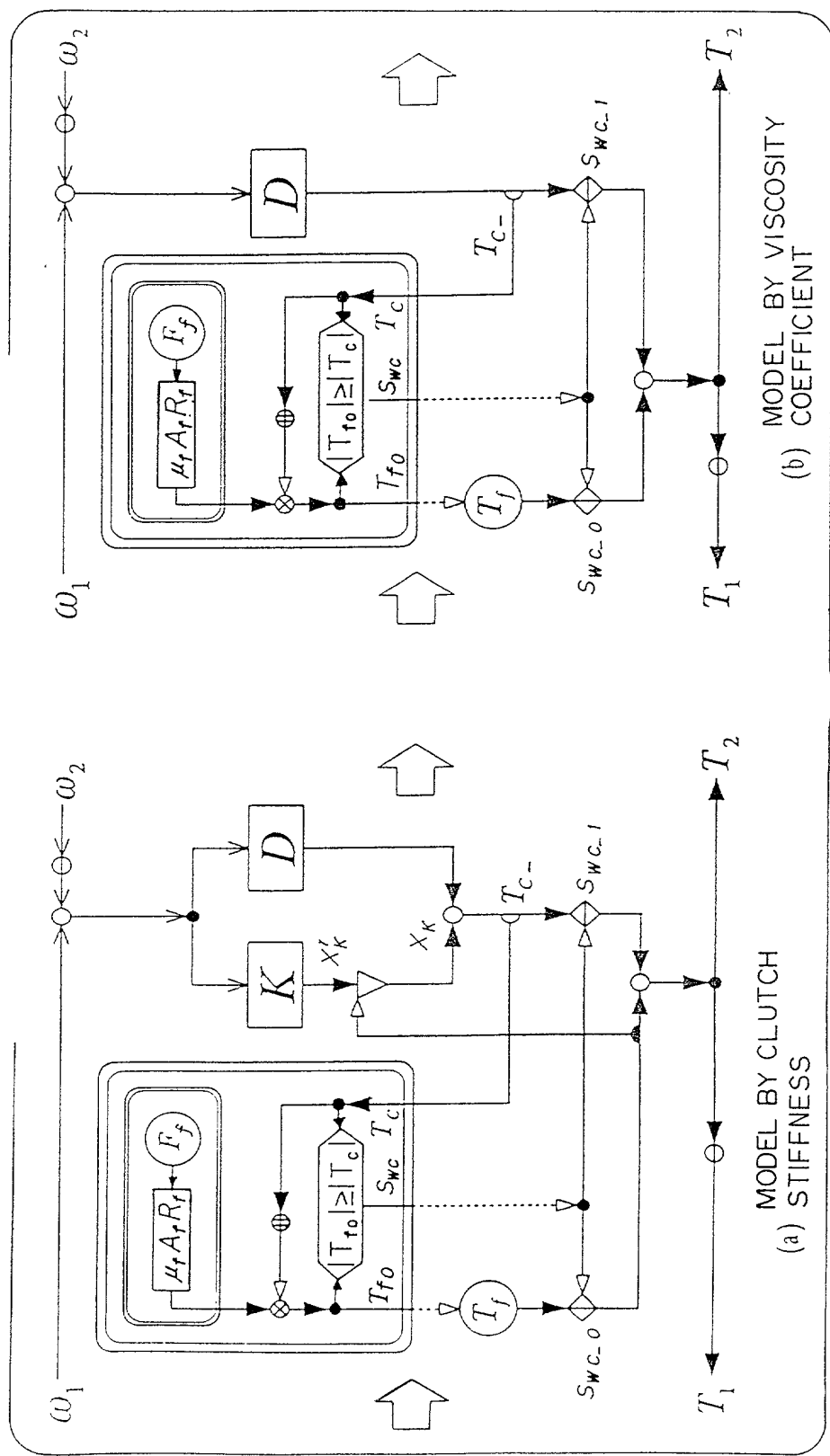


Fig. 54

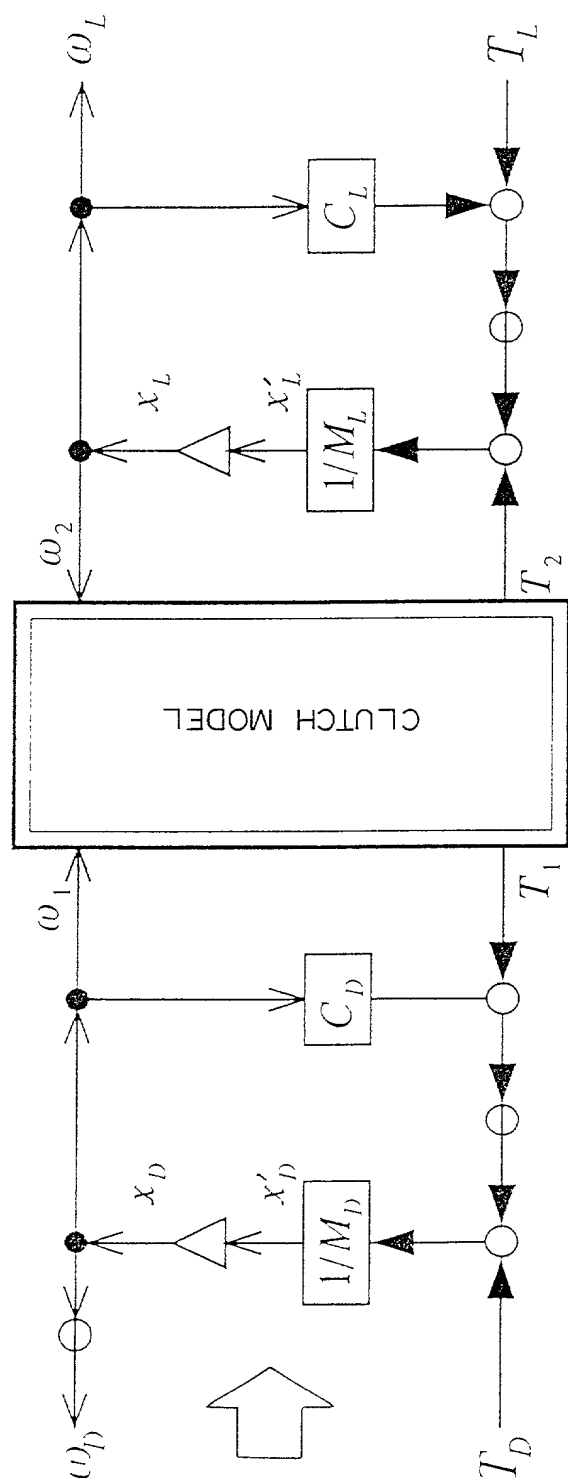


Fig. 5.5

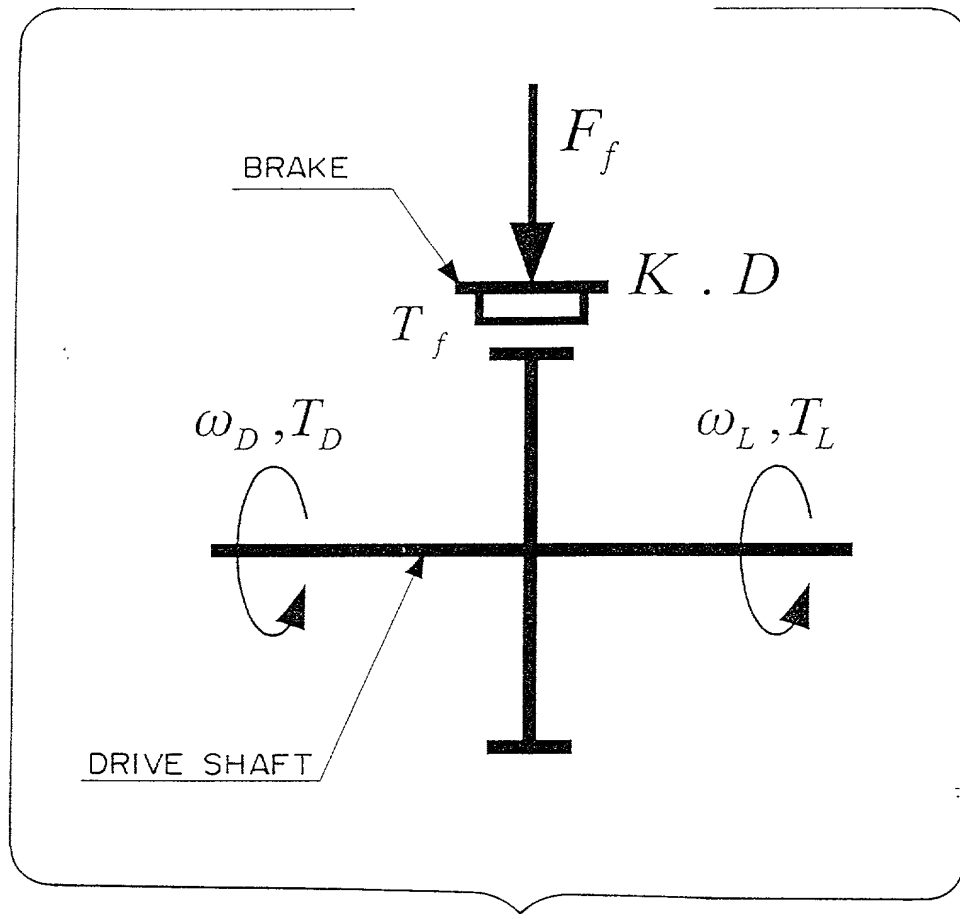


Fig.57

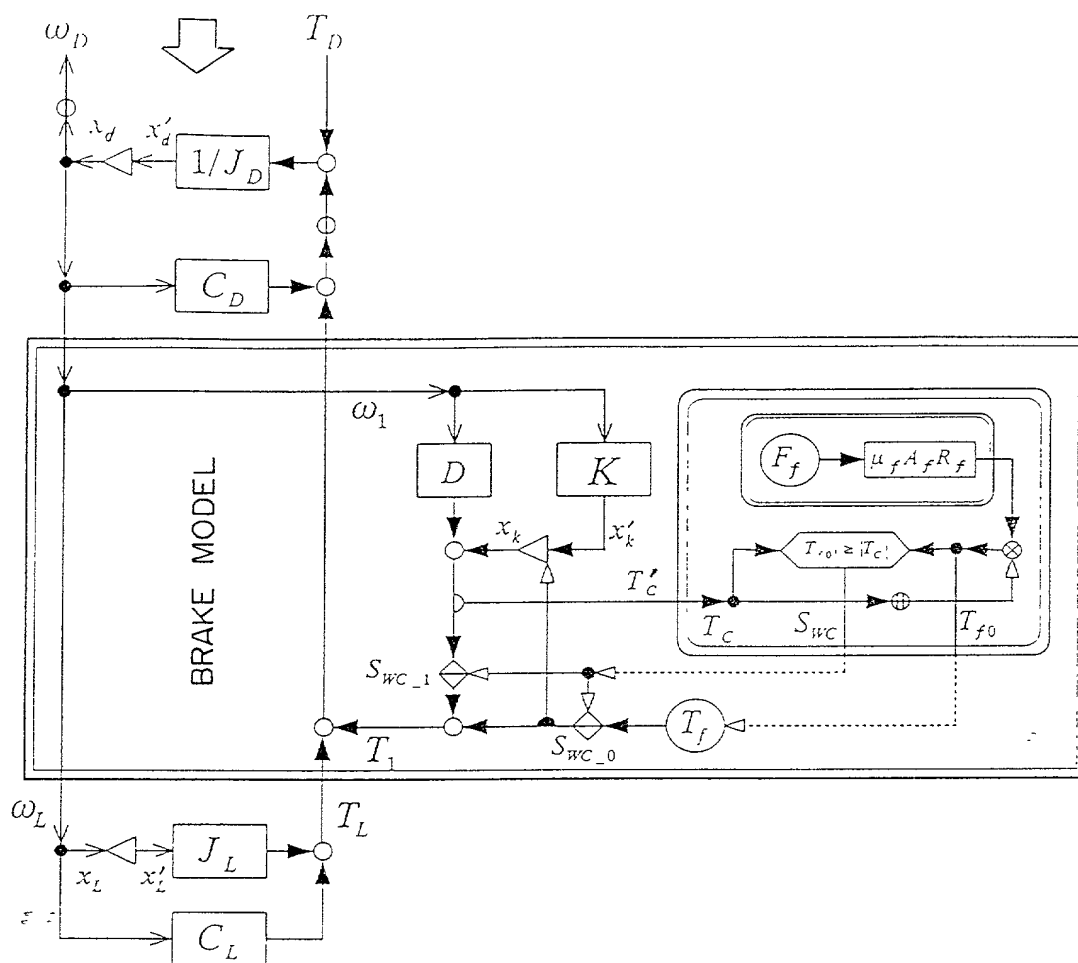


Fig.58

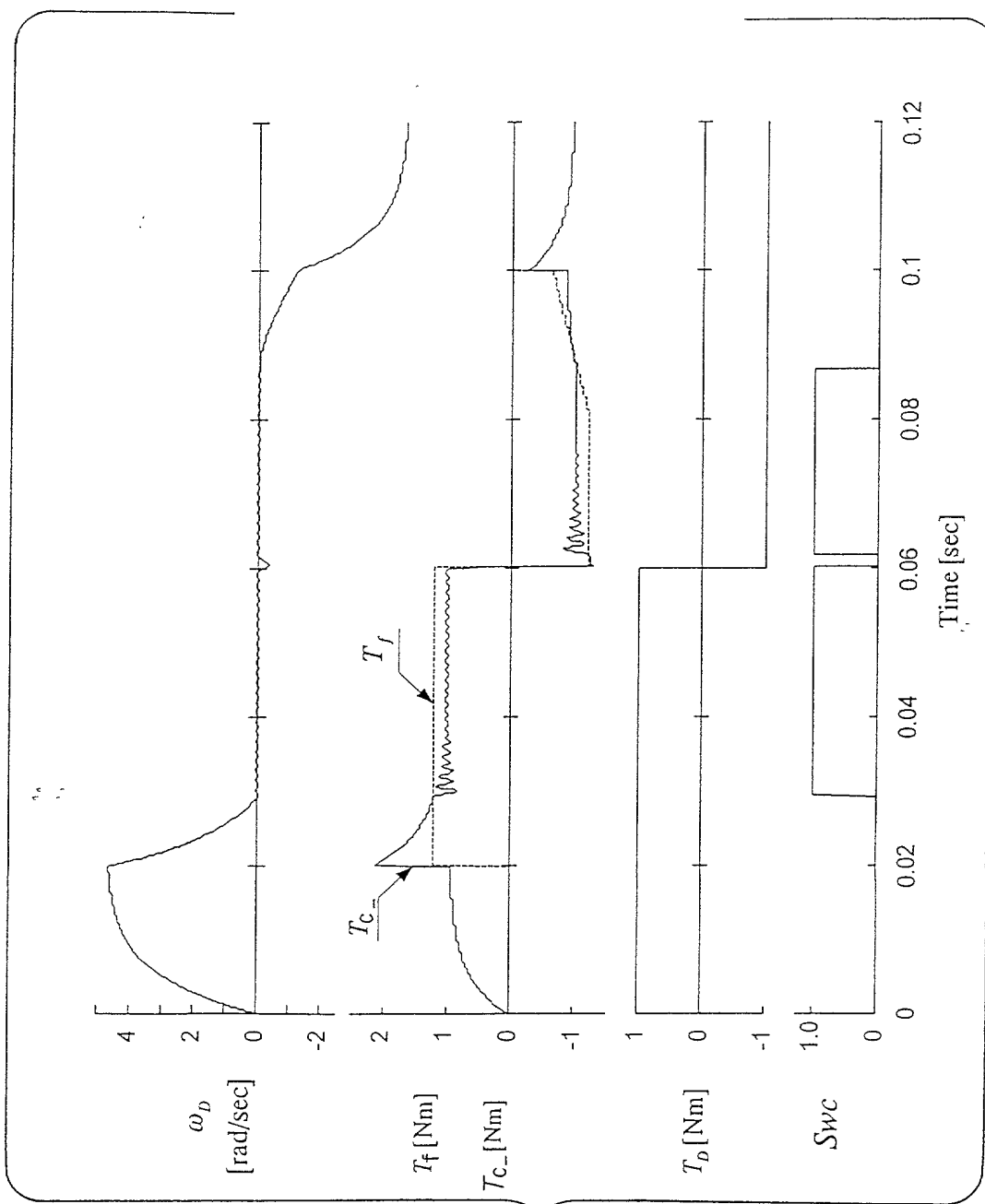


Fig. 5.9.

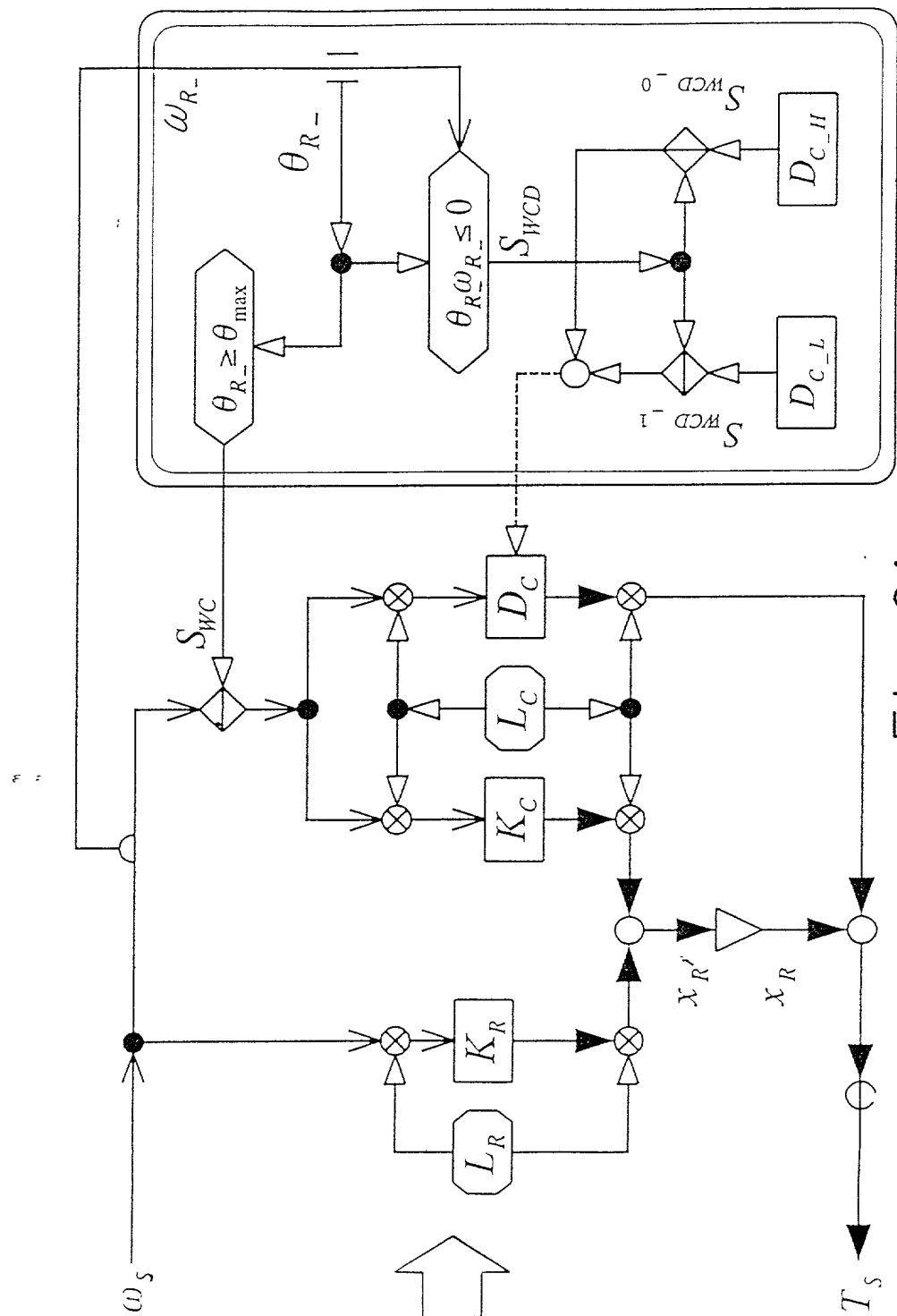


Fig. 61

11

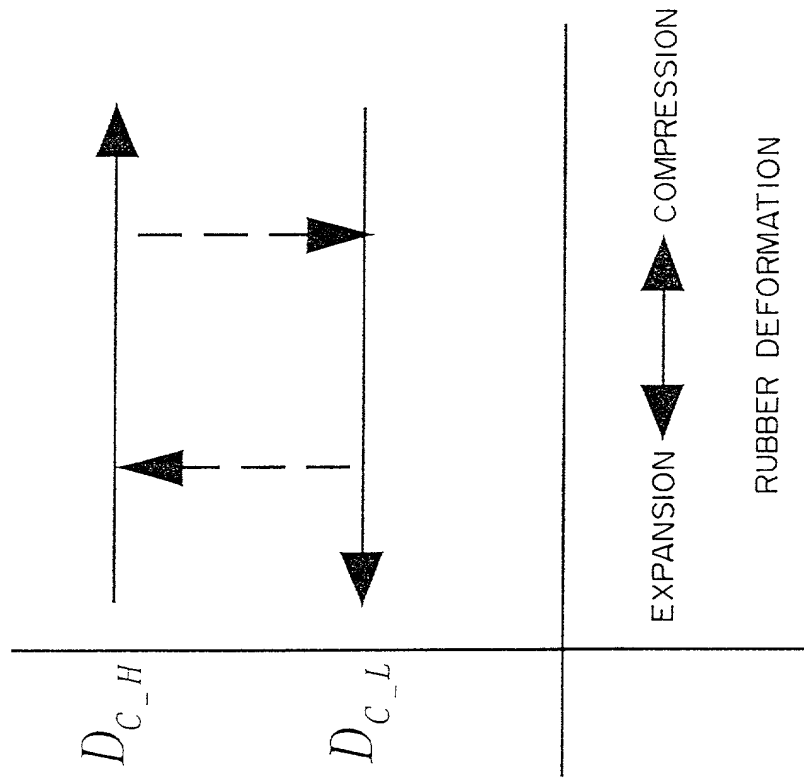


Fig.62

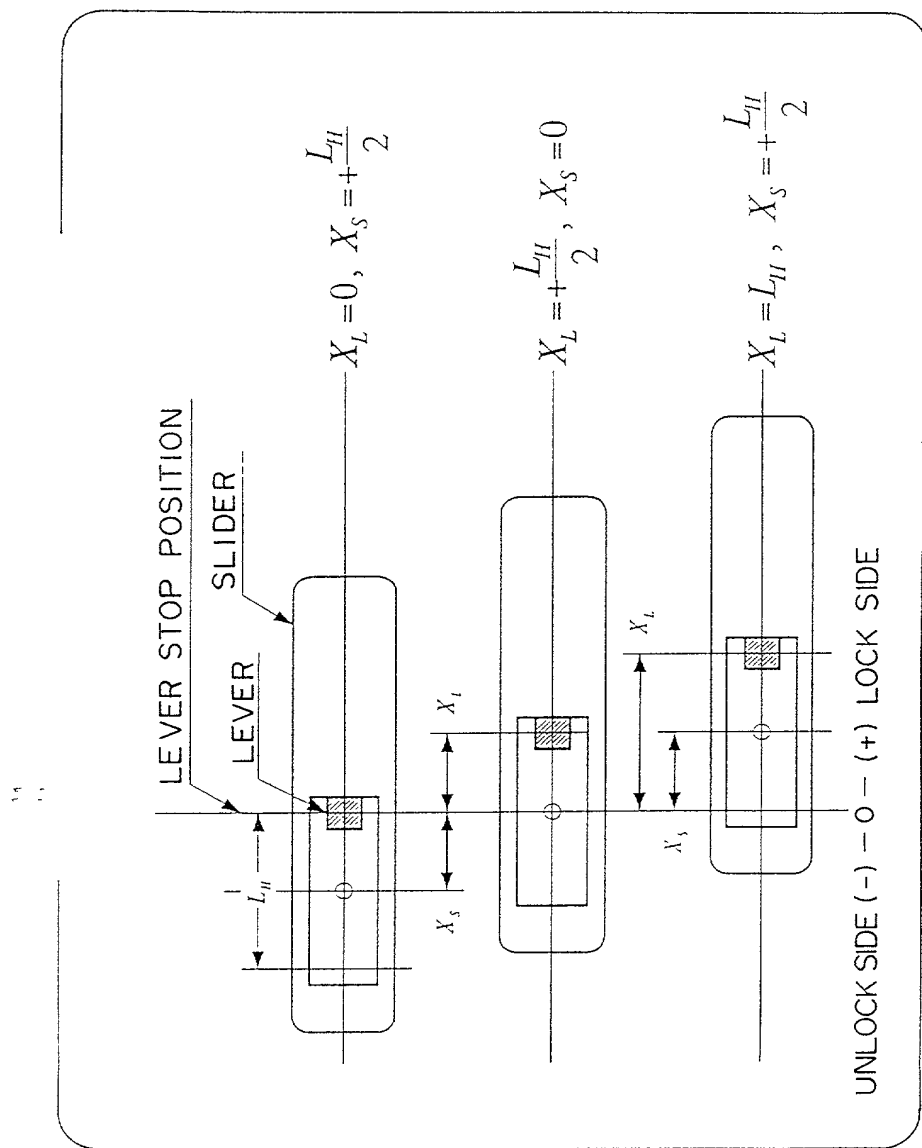
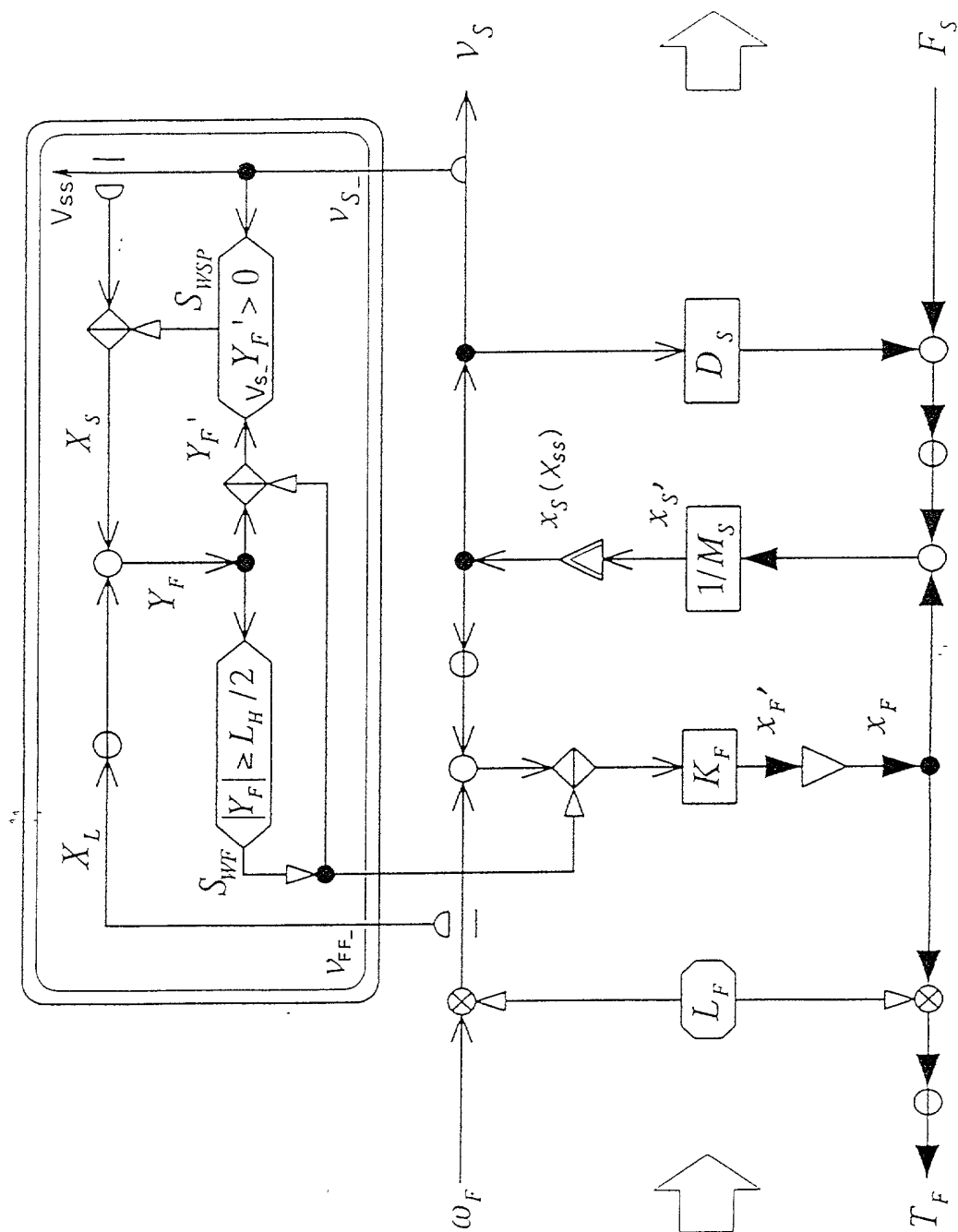


Fig. 63



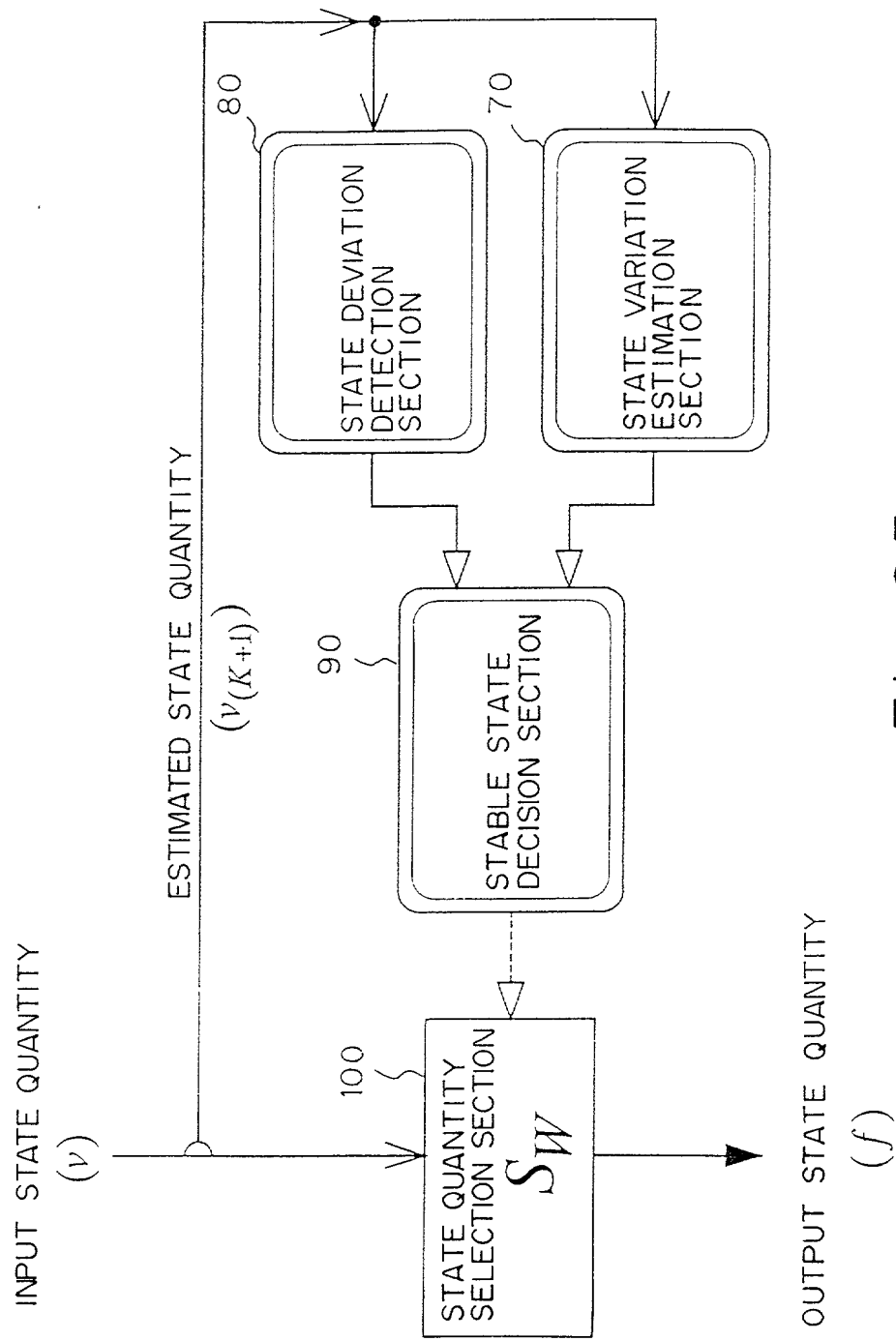


Fig.65

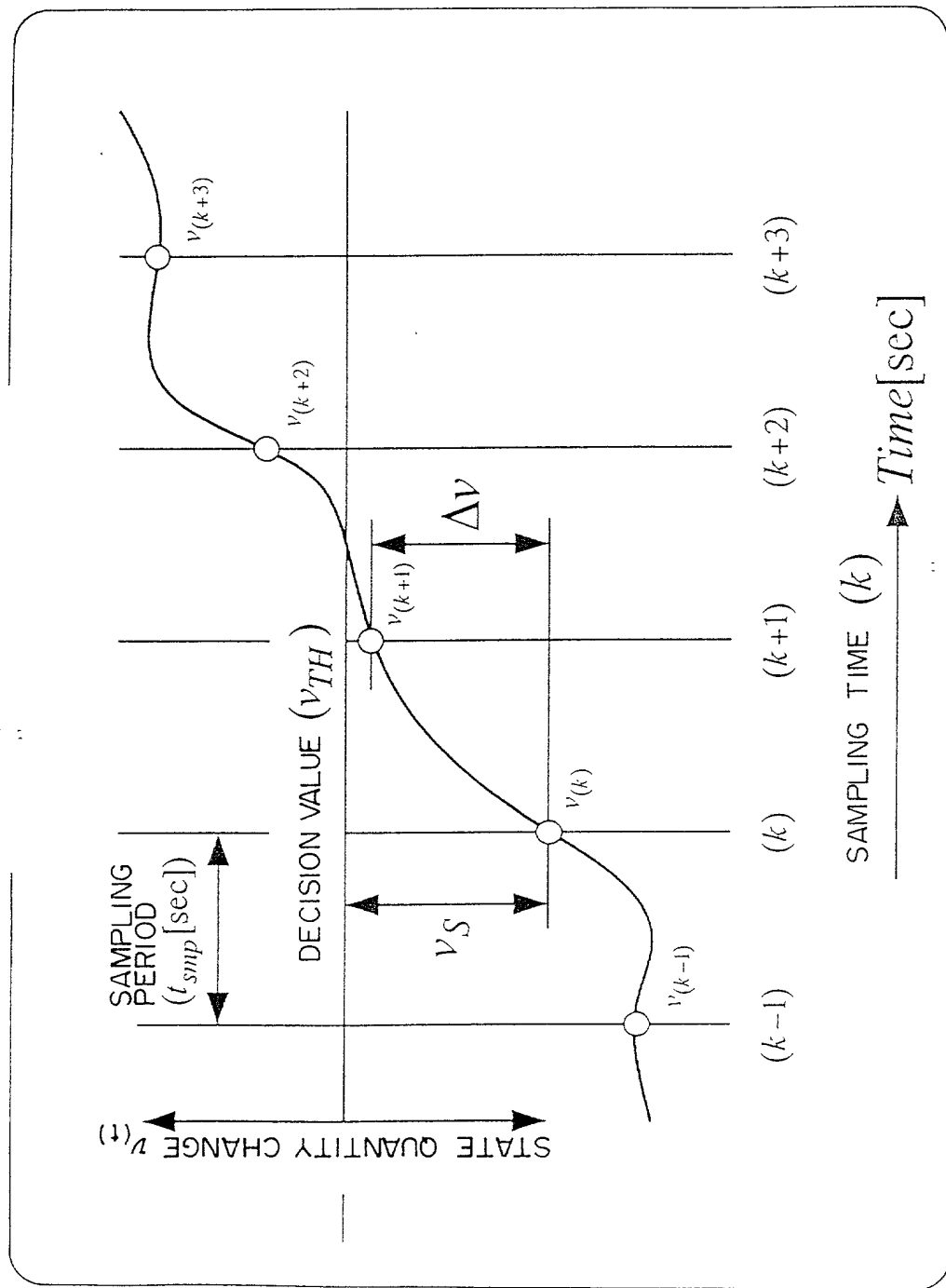


Fig.66

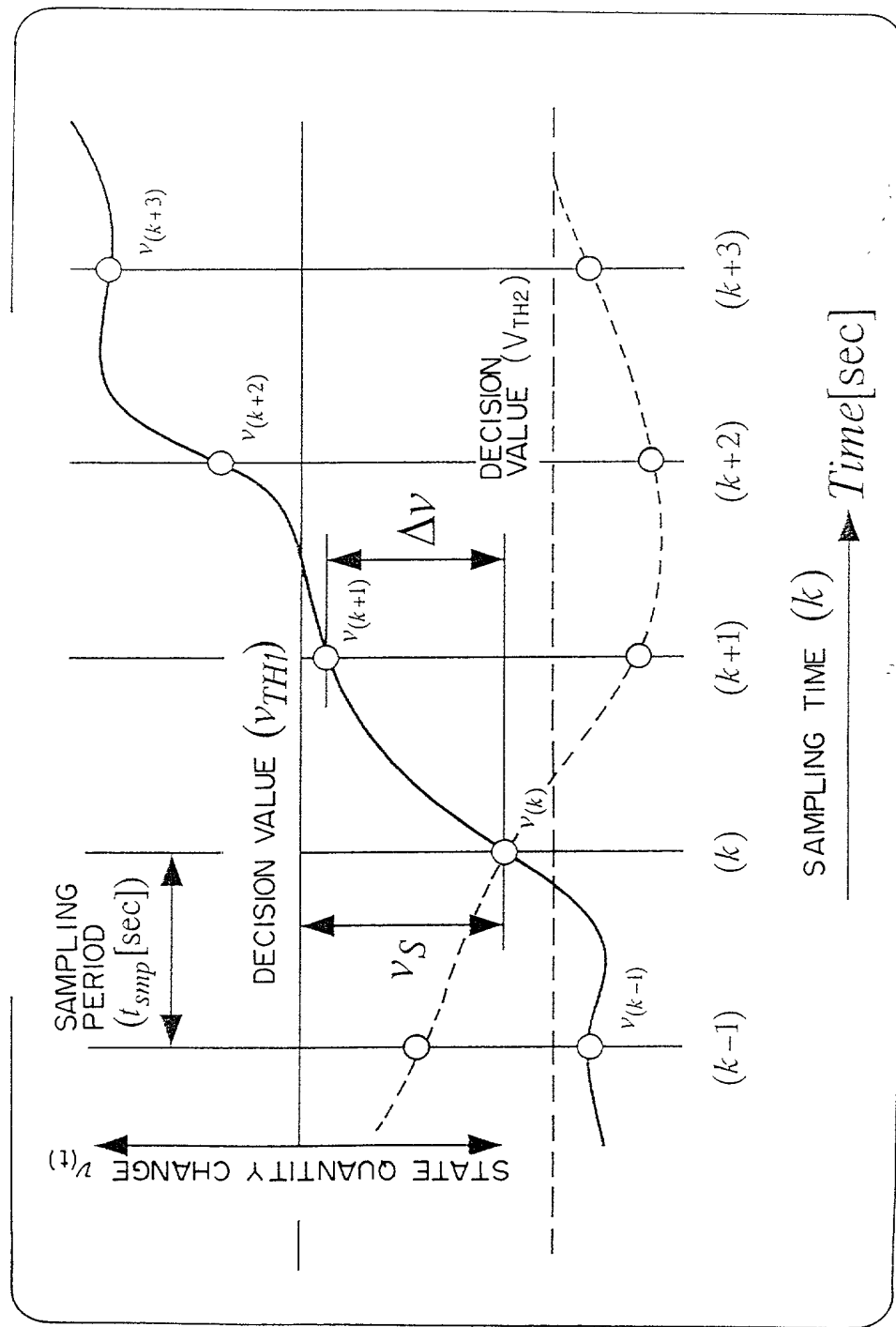


Fig. 67

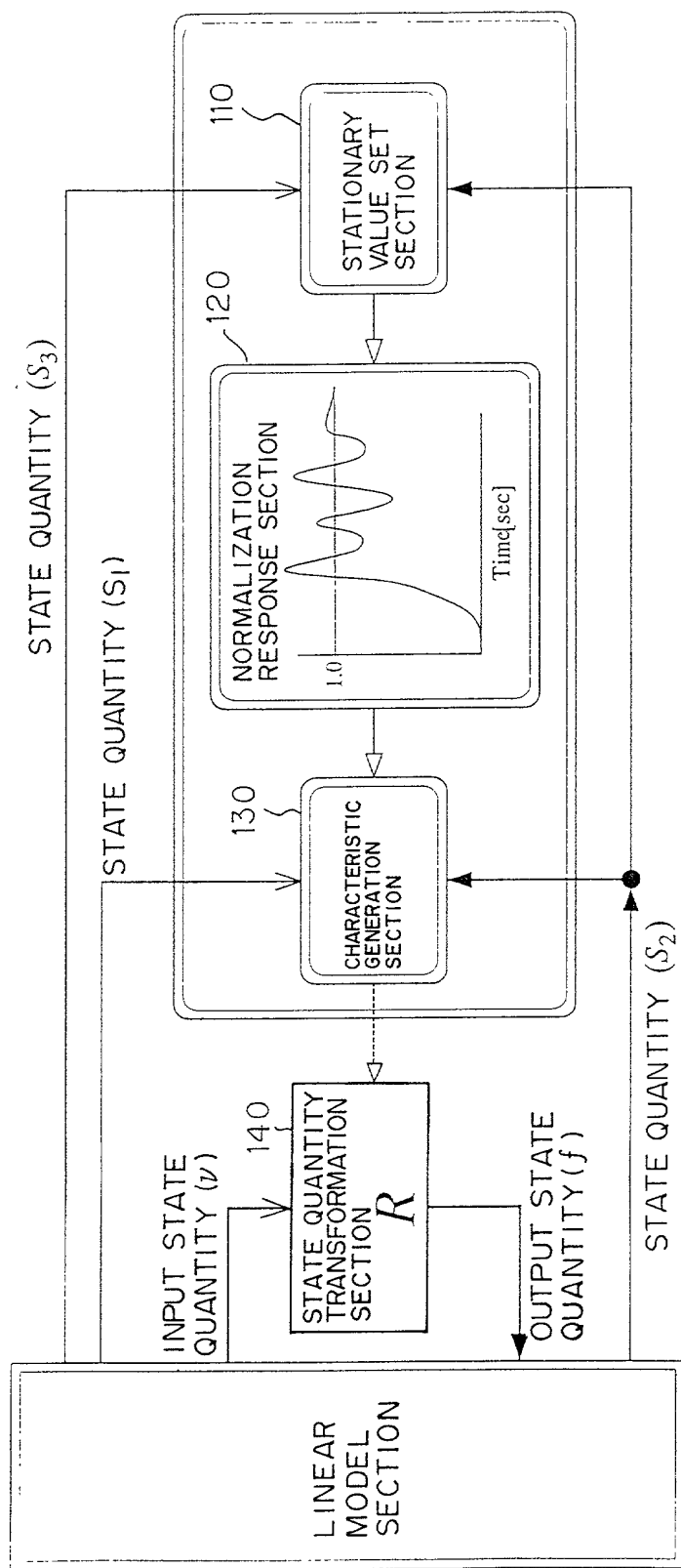


Fig.68

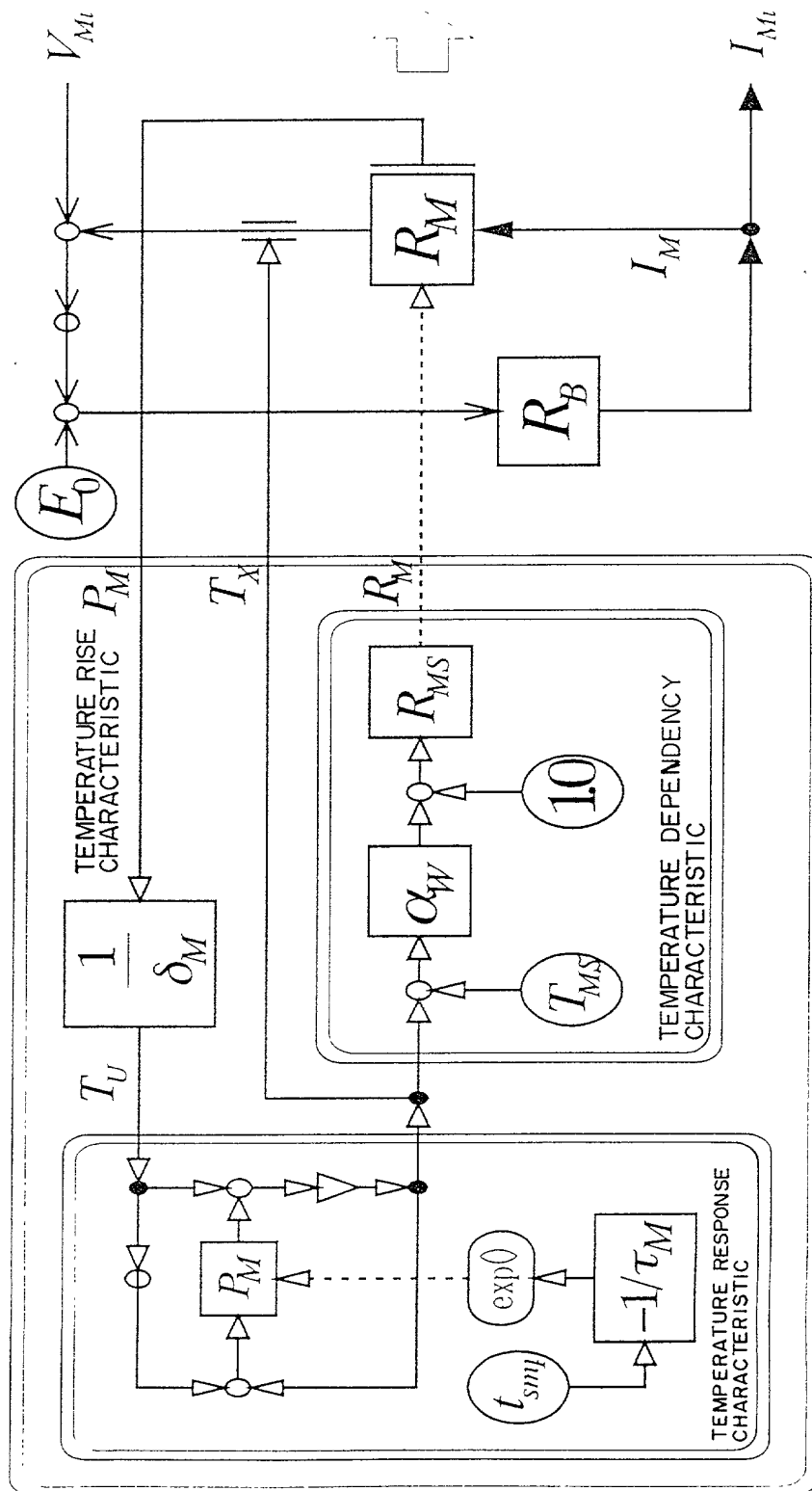


Fig.69

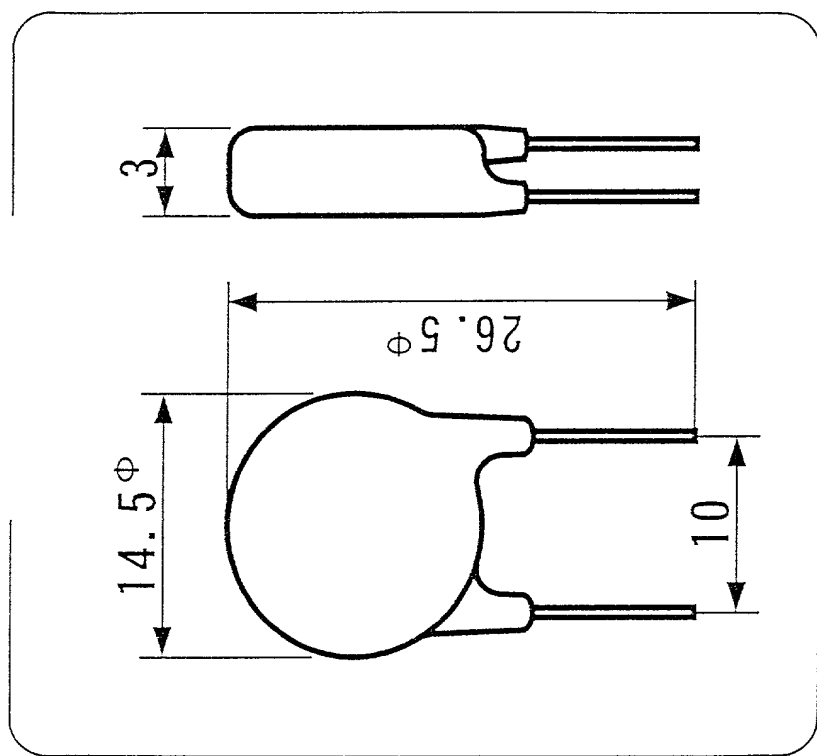


Fig. 71

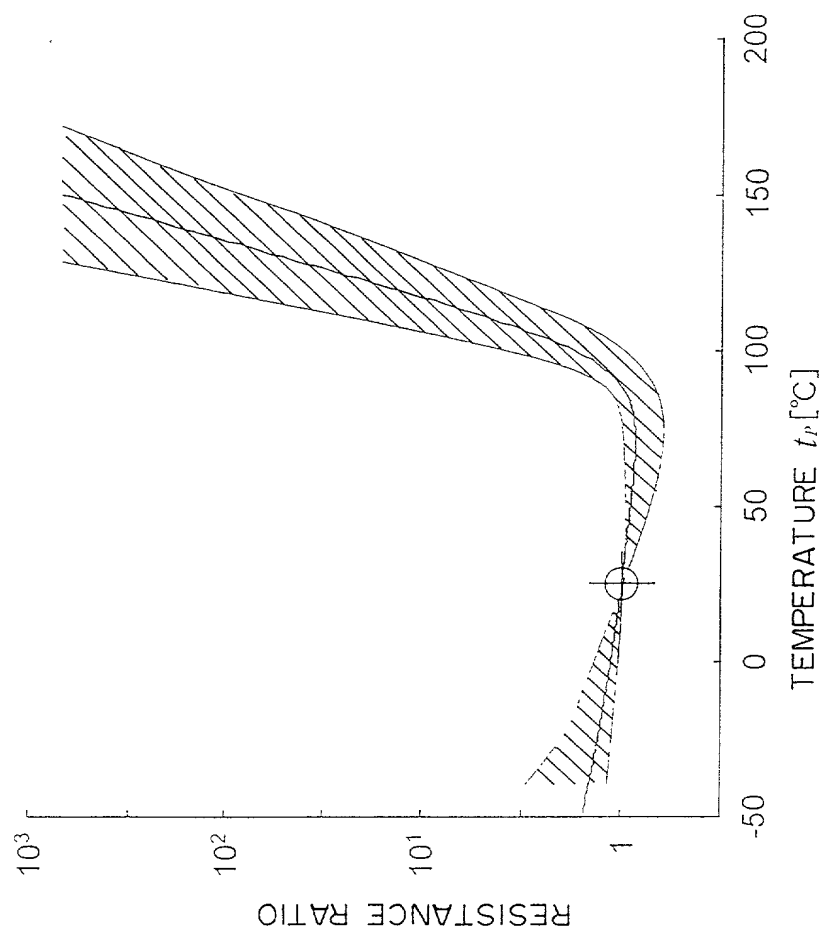


Fig. 73

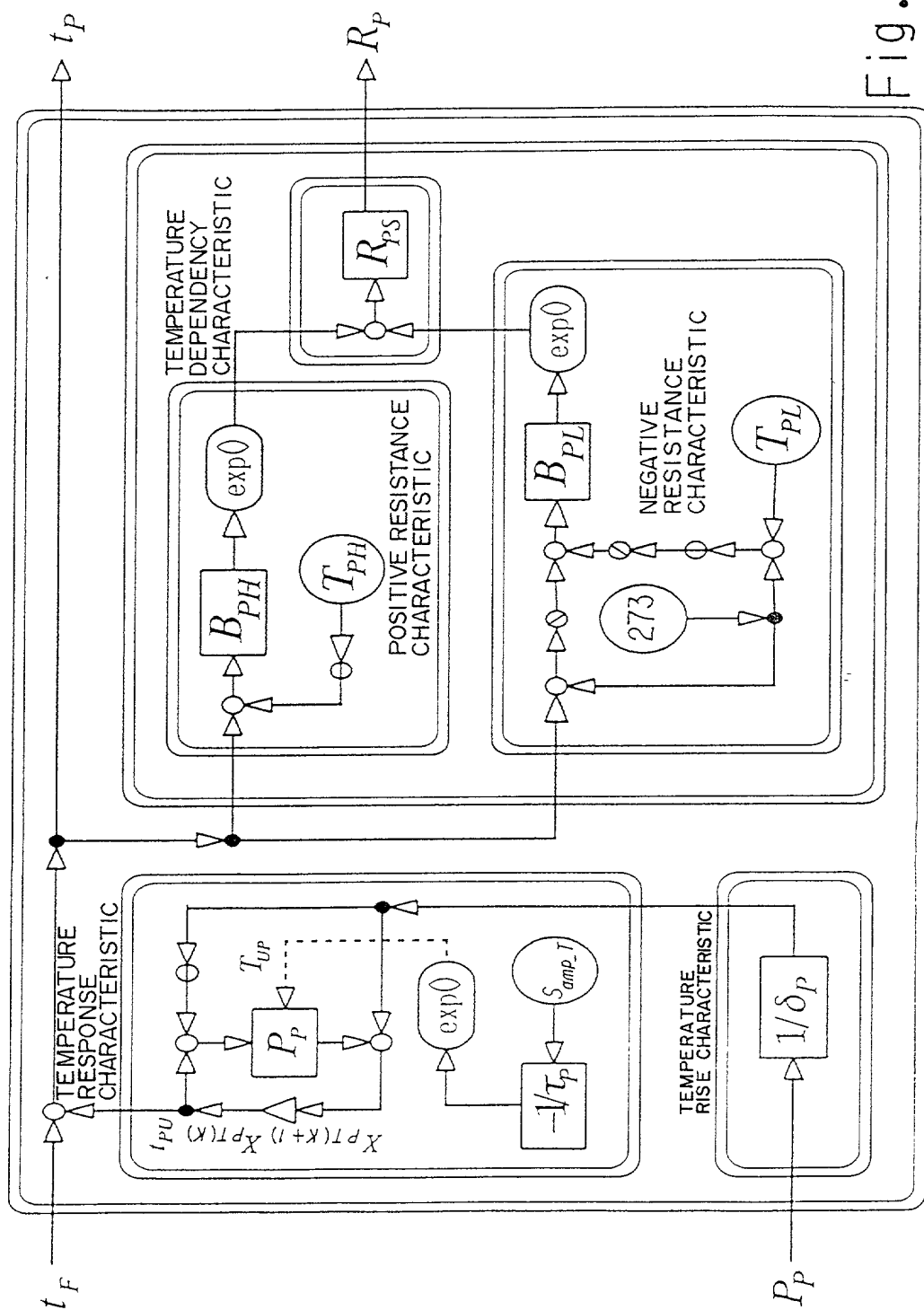


Fig. 74

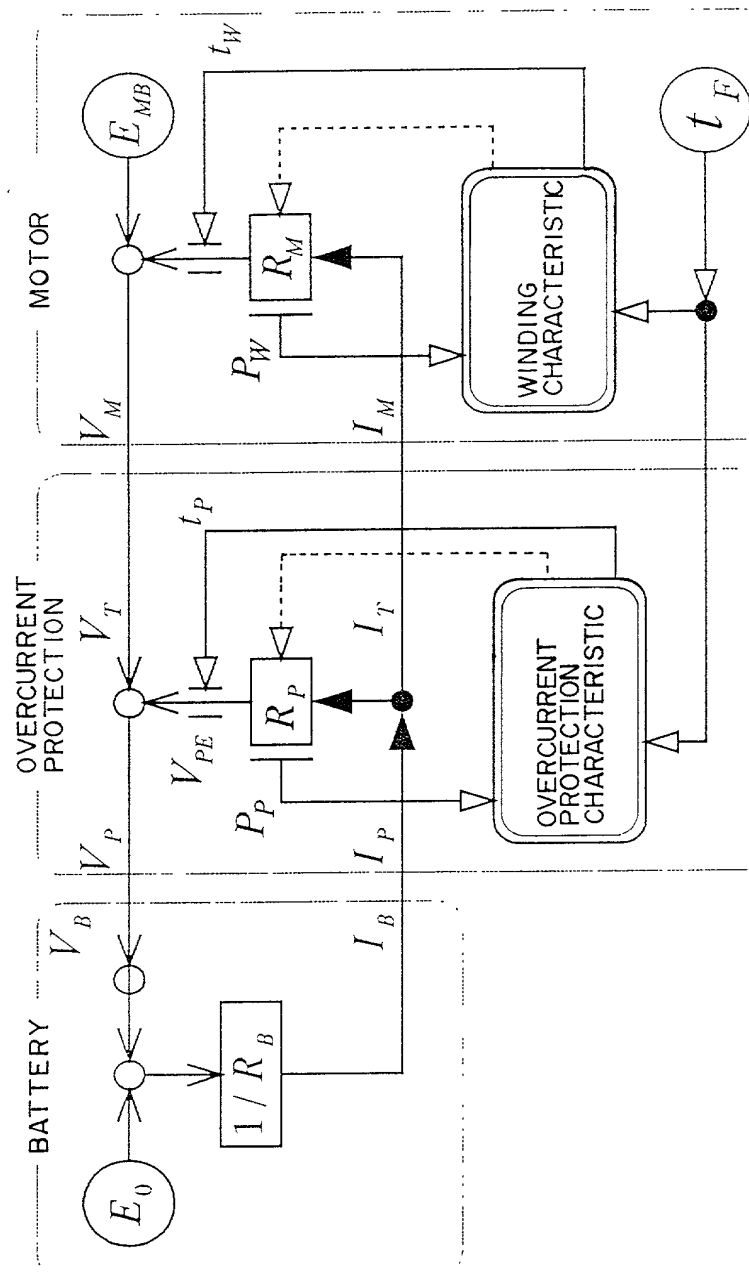


Fig. 75

Fig. 76

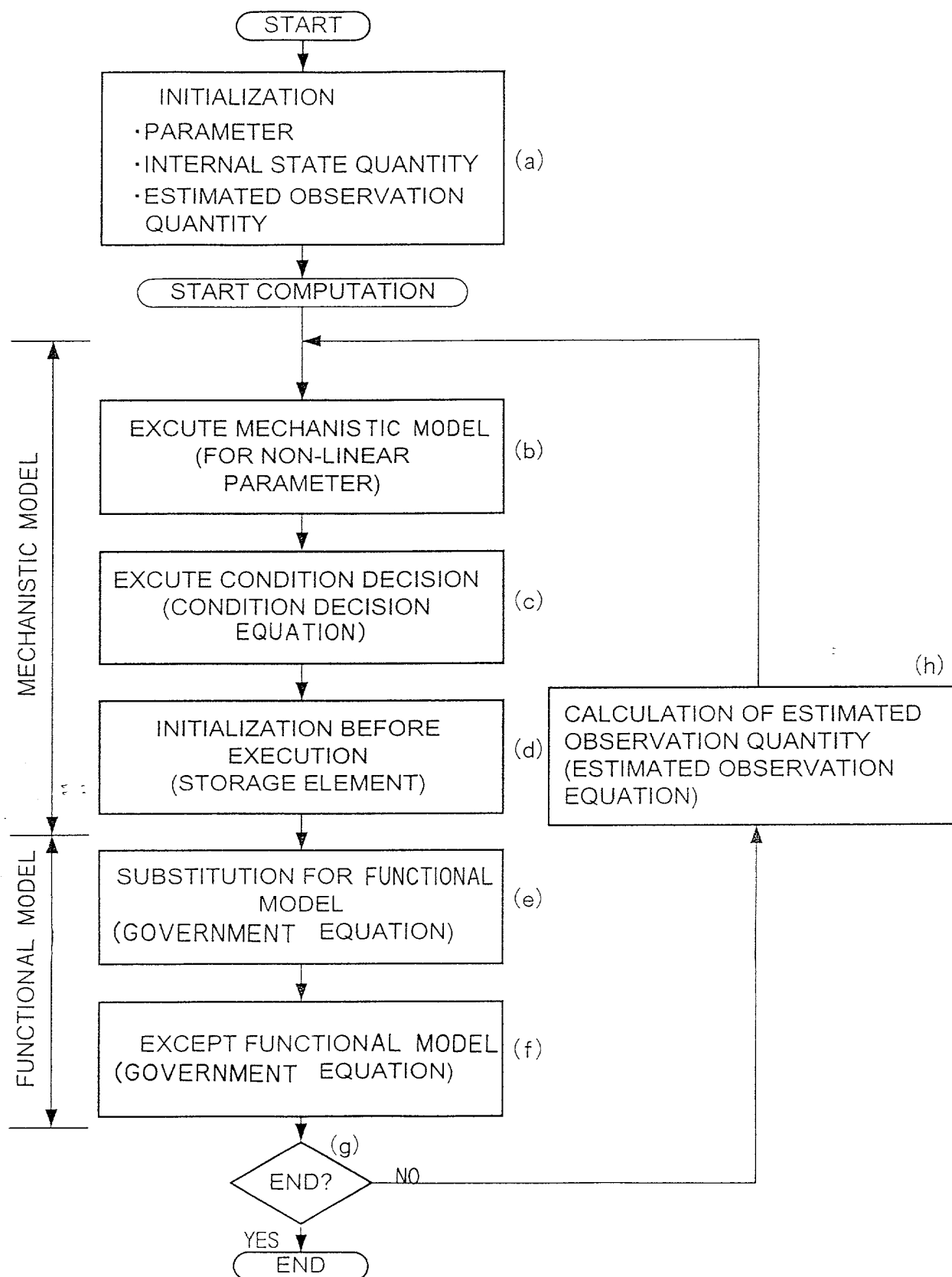


Fig. 77

SYMBOLS NAME		SYMBOL	REMARK
STATE QUANTITY	ENERGY		ENERGY INPUT AND OUTPUT DIRECTION
	POTENTIAL QUANTITY		VOLTAGE, VELOCITY, RATE OF FLOW, etc.
	FLOW QUANTITY		CURRENT, POWER, PRESSURE, etc.
OPERATOR	ADDITION		$C = A + B$
	MULTIPLICATION		$C = A \times B$
	BRANCH (DISTRIBUTION)		$A = A = A$
	SIGN TRANSLATION		$B = -A$
	INVERSION		$B = 1/A$
	INTEGRAL		$B = \int A dt$
	DIFFERENTIATION		$B = dA / dt$
CHARACTERISTIC	FACTOR TRANSLATION		$B = R \times A$ (R : FACTOR)
	CHARACTERISTIC TRANSLATION		$B = P \times A$ (P : CHARACTERISTIC)
	SIDE LOAD		$B = A$ (A : STATE QUANTITY)
	COORDINATE FACTOR		$B = \Phi A$ $\Phi^{-1} D = C$ (Φ : FACTOR)
COEFFICIENT	OBSERVATION POINT		$B = A$ (B : OBSERVATION VALUE OF A)
	FUNCTIONAL MODEL ELEMENT		A_p, B_p : POTENTIAL QUANTITY A_f, B_f : FLOW QUANTITY
	STORAGE STATE QUANTITY (INTERNAL ENERGY)		$B = (\text{INTERNAL TEMP. SET VALUE OF A})$ $C = (\text{INTERNAL TEMP. OBSERVATION})$ (POTENTIAL QUANTITY)
	ENERGY OBSERVATION		$C = AB$ or $A^2 R$ (A, B : POTENTIAL/FLOW QUANTITY)

Fig.78


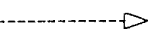
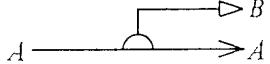

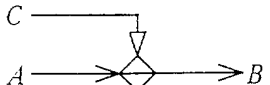
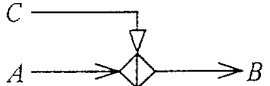




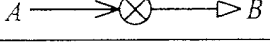


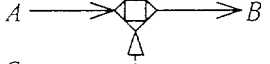
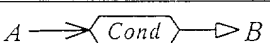
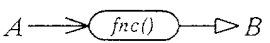
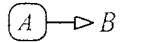
QUAN- TITY	OPERATION QUANTITY		OPERATION CHARACTERISTIC VALUE (SIGNAL OTHER THAN STATE QUANTITY)
	SUBSTITUTION QUANTITY		SUBSTITUTION OF CHARACTERISTIC FACTOR SIDE LOAD
LOGICAL OPERATOR (FOR FUNCTIONAL MODEL LIE)	ESTIMATED OBSERVATION QUANTITY		$B_{(k+1)} = A_{(k+1)}$ B OBSERVES VALUE OF SAMPLING PERIOD (k+1) BEFORE PRESENT (k)
	TIME OBSERVATION		NORMAL: A=1 OR 0 STORE EXECUTION TIME time WHEREIN A BECOMES 1 AND MAINTAIN THE SAME
	NC SWITCH (NORMALLY ON)		NORMAL: C=0 if (C=0) then (B=A) else (B=0)
	NO SWITCH (NORMALLY OFF)		NORMAL: C=0 if (C=1) then (B=A) else (B=0)
	LOGICAL PRODUCT		$C = \min(A, B)$ (SMALLER ONE OF INPUTS A AND B IS SET TO C)
	LOGICAL SUN		$C = \max(A, B)$ (LARGER ONE OF INPUTS A AND B IS SET TO C)
NON - LINEAR OPERATOR (FOR MECHANICAL MODEL USE)	ABSOLUTE VALUE		$B = A $
	SIGNAL		$B = A / A $
	SQUARE		$B = A^2$
	INITIALIZATION (INTEGRAL)		if (C=0) then $B = \int A dt$ else $B = 0$
	CONVOLUTION INTEGRAL		
	SAMPLING		$B_{(k)} = A_{t-k, C}$ (INPUT C IS TIMING OF SAMPLING) $B_{(k)} = A_{t'-1}$ (OMITTED INPUT C)
	CONDITIONAL DECISION		if (Cond) then (B=1) else (B=0) (Cond: CONDITION DECISION FORMULA)
	FUNCTION		$B = fnc(A)$ (fnc(): FONCTION NAME/SYMBOL)
	OPERATION		$A = B$ (A: SIGNAL)

Fig.79

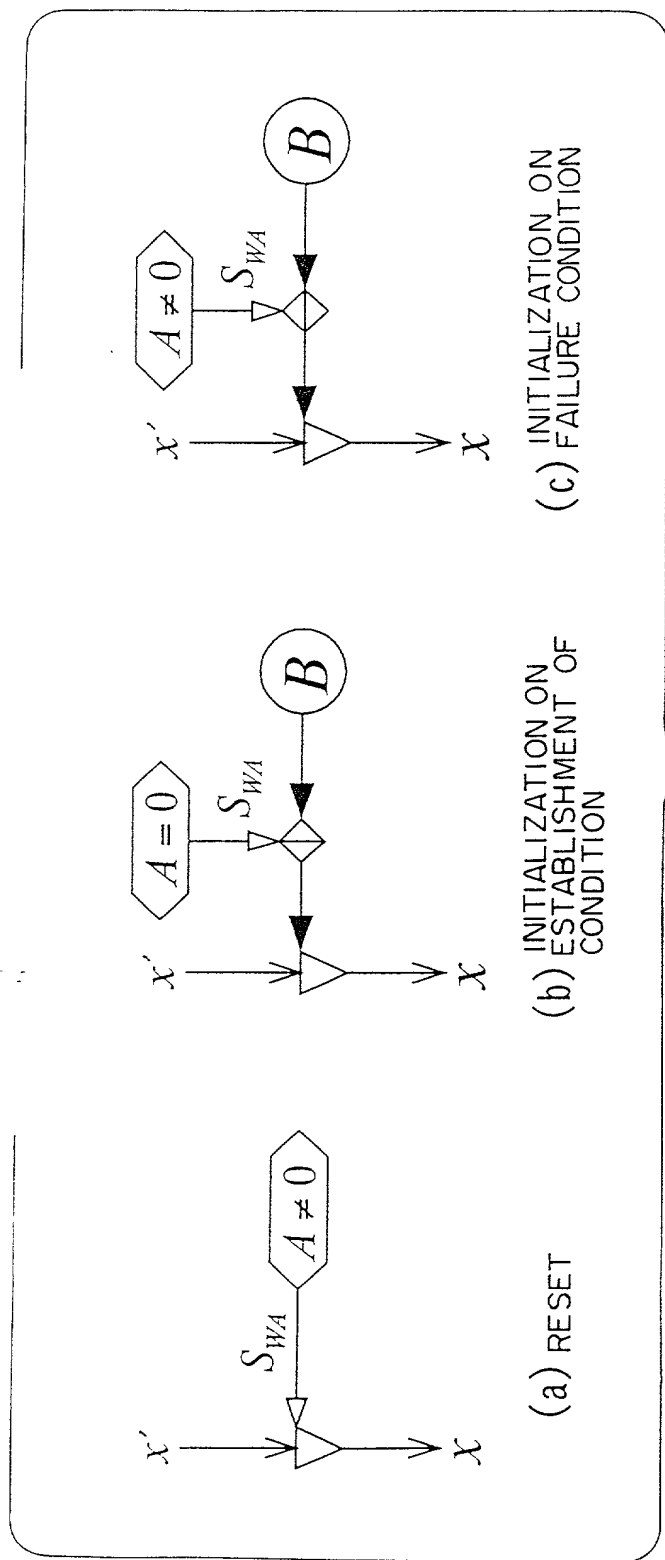


Fig.80

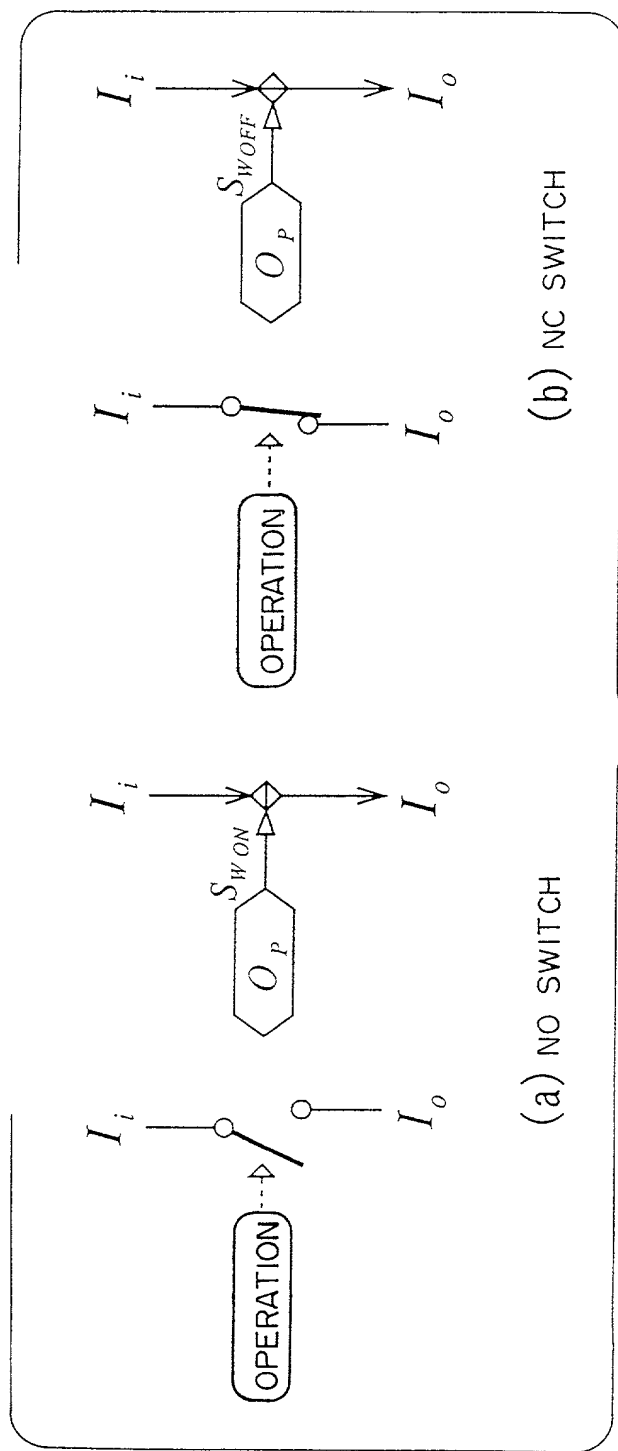


Fig.81

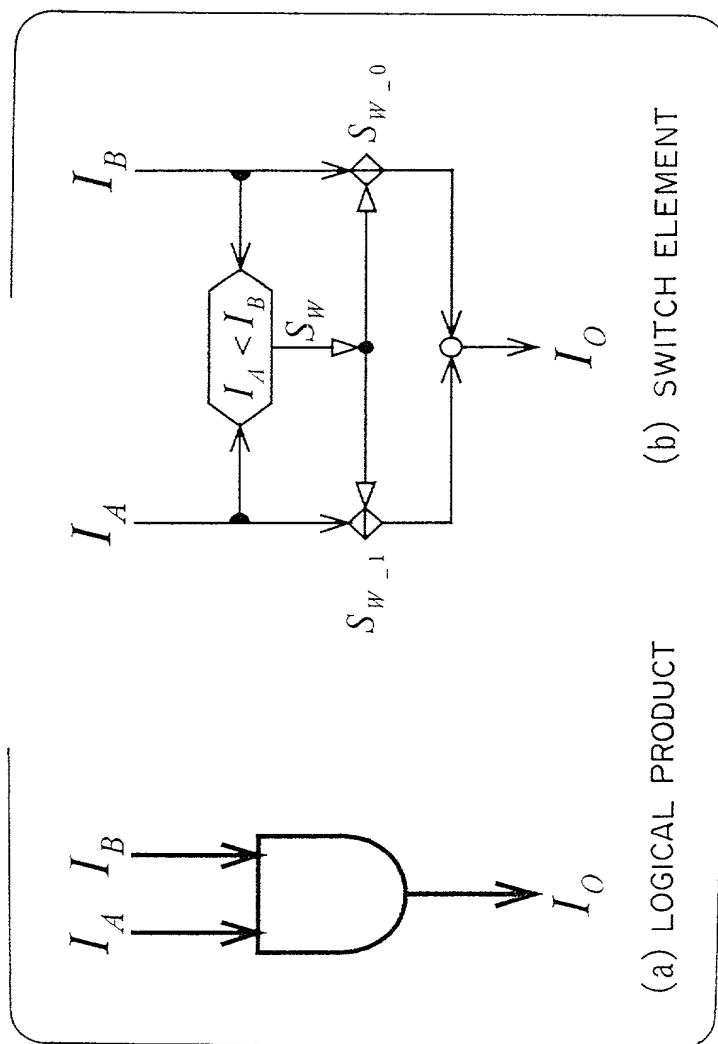


Fig.82

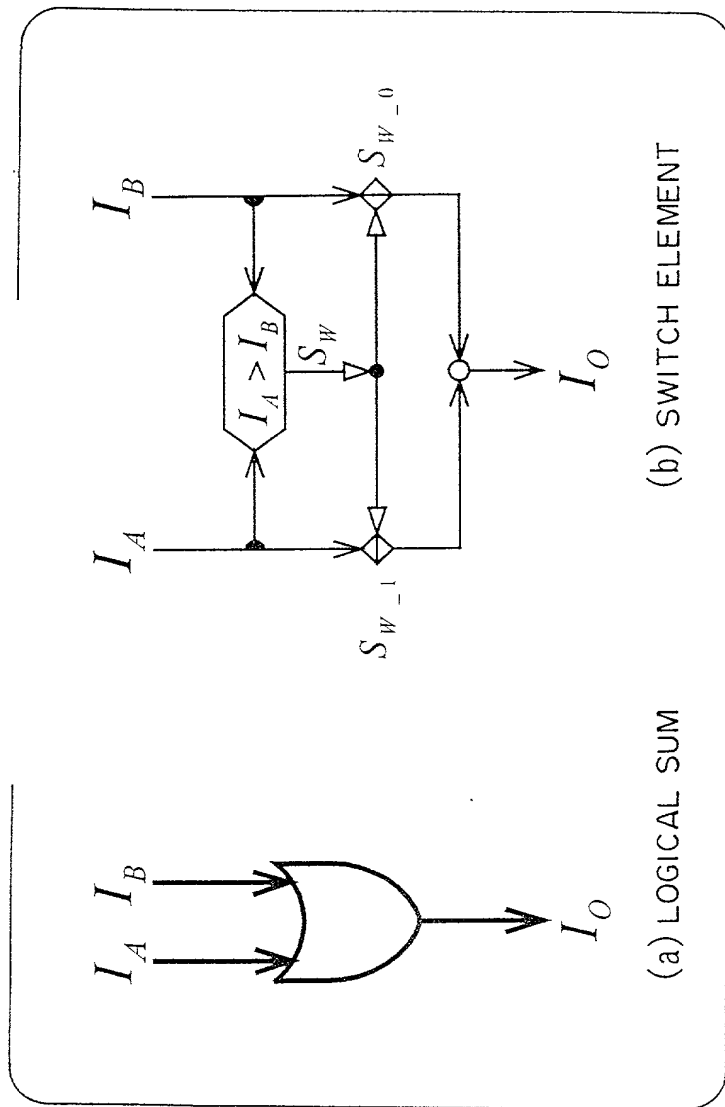


Fig.8.3